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Classroom Interaction in Preschool Education:

A Review of Research

by



Sharon Murphy

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

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FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled CLASSROOM INTERACTION IN PRESCHOOL EDUCATION: A REVIEW OF RESEARCH, submitted by SHARON MURPHY in partial fulfilment of the requirements for the degree of Master of Education.

Abstract

This study is a review of 159 research documents which were selected from the Current Index to Journals in Education and the Resources in Education indices (1975-1981) on the basis of the following criteria: (a) children of preschool and/or kindergarten age level were the focus of the research, (b) the investigators used observation as one of the techniques for data collection, and (c) the observational data were collected in the natural setting. The studies were then sorted according to the independent variables which each examined and were classified under three broad topical headings--the child, the teacher, and the setting. Within both the child and teacher categories, the presage characteristics and behaviors were examined, while within the setting category the variables were further subdivided into specific setting aspects.

From the review approximately 30 trends and one generalization were gleaned. That is, given a particular independent variable in the pre-school setting, it was likely that certain dependent variables would be affected in a particular manner. While the trends were developed from either a few studies which indicated similar results or from several studies with similar results but one or two studies with contradictory results, generalizations were arrived at when there was unanimity among a group of studies with regard to the effects of an independent variable.

Possible explanations for the lack of generalizations housed within the research were put forth and then the research was examined from a

research technique perspective, a comparative perspective and a curriculum theory perspective in an attempt to ferret out both overt and hidden meanings within the literature. Finally, reflections were presented upon what this review has to offer teachers, and in an indirect way, teacher educators.

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Dedicated to the memory
of my brother, Gary
(April 10, 1953 - January 6, 1981)

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CHAPTER I

INTRODUCTION

Blocks, probably, more than any other one kind of play material, lend themselves to the child's constructive interests and needs ...and afford through their use the greatest opportunity for the development of cooperative thinking and acting. (Garrison, 1926, p. 20)

There are other times when a child needs to know that we [teachers] are willing to help him and one who may not have enough affection at home or is in a mood of depression or despair may be very much helped by the spontaneous expression of affection which is given by an adult who is sensitive to his needs. (Gardner, 1956, pp. 15-16)

A soft voice is useful in establishing communication with children and in maintaining control over the classroom. (Seefeldt, 1980, p. 164)

The quotations above exemplify a strong tradition in the instruction of young children--a tradition of knowing what teaching behaviors are most successful, a tradition of knowing what curricular approaches are best suited to the education of young children, and a tradition of knowing what behaviors may be expected of young children. As the citations indicate, this tradition in early childhood education has permeated teacher education literature in early childhood education for the past century.

From where has this tradition emanated? A glance through Garrison (1926), Gardner (1956) and some portions of Seefeldt (1980) indicates

that, more often than not, this tradition has been based upon the accumulated experiences of the individual writers and their philosophical orientations, rather than upon data collected through research. This philosophical orientation towards shaping what goes on in classrooms is not particular to early childhood education, but for many years was characteristic of the educational field as a whole.

Unlike the field of preschool education, however, large efforts have been made over the past two decades in the regular school system to conduct research in classrooms and to attempt to translate the findings of that research into practice. The basis for such research frequently stemmed from reviews of studies scattered throughout the literature, thus consolidating the information which existed and making it available in a more accessible form. Exemplars of such reviews are those found in Gage (1963), Travers (1973), Dunkin and Biddle (1974), Brophy and Good (1974), Medley (1977) and Good (1979). With the consistent review-research-review-research trend, a wealth of information has been and is being accumulated describing life in classrooms. Although many authors concur that no definitive patterns have been established, inroads have been made towards establishing a foundation for teacher practices. What becomes readily apparent upon scanning the reviews, apart from short reviews such as those of Sears and Dowley (1963) and Beller (1973), is that the lower grade limit for studies reviewed is typically grade one or kindergarten and thus, the absence of reviews of research on classroom interaction in preschool is notable.

Brophy (Note 1) has suggested three major reasons for the apparent absence of research in the prekindergarten area--(a) "University departments concerned with nursery schools and early childhood education have traditionally been driven by philosophy and commitment (particularly

the whole child, child centered, discovery/exploration, etc. ideology), rather than by an orientation toward research and empirical data collection." (b) There is a lack of agreement by society in general on the goals and purposes of early childhood education--systematic instruction as opposed to the discovery/exploration approach. (c) There are many problems inherent in measures for preschool children, "cognitive measures of preschool education...[being] considerably less reliable than comparable cognitive measures for older children, and so-called affective measures...[being] virtually useless, in my [Brophy's] opinion." In view of the absence of any attempt to amalgamate the research in preschool education, little can be said to refute or support the rationale suggested by Brophy (Note 1), other than to counter Brophy's suggestions with arguments based solely upon opinion. In order to provide a sound basis for educational practice in early childhood education and to determine if weaknesses, such as those mentioned by Brophy (Note 1), are an accurate description of the "state of the art" in early childhood education, it would appear necessary, indeed imperative, that a review of literature examining the classroom interactive processes in preschool education be conducted.

Purpose of the Study

The purpose of this study is to conduct such a review--a review of research literature on preschool education which is concerned with the interactive processes that occur in classrooms. Through such a review, it may be possible to characterize the preschool classroom as an entity distinct from or similar to regular school classrooms and to identify the prevailing concerns of early childhood educators.

Procedure

A literature search was conducted which included relevant research literature from January 1975 to January 1981. The primary source for this literature search was information housed in the Current Index to Journals in Education and Resources in Education. The literature selected for final review had to meet the following criteria:

1. Studies selected had to include observation as one of the instruments used in conducting the research.
2. Studies selected had, as the sample, children in pre-kindergarten programs of all types and children in kindergarten programs.
3. Studies selected had to have examined classroom interactive processes through collection of observational data in the natural setting.

Upon selection of the final sample of studies for review, the studies were examined through analysis of the variables which each investigated. Through pooling studies with common concerns, themes in early childhood education were identified and discussed to determine if there is a consensus in the literature on these themes and to determine if these themes are particular to early childhood education.

Significance of the Study

This review of research is anticipated to fill a gap in the compilation of research on classroom interactive processes and may indicate areas within early childhood education requiring further research. A comprehensive review would, perhaps, provide teachers with research based material upon which to base their daily decisions in classrooms. A review such as the one proposed would also enable teacher

educators to train preservice teachers in methods based upon research evidence.

Plan of the Investigation

Chapter I has outlined the need for research on classroom interactive processes in the area of preschool education and has indicated the criteria to be used in selecting the studies to be reviewed.

Chapter 2 will review the techniques used in conducting an integrative review and will highlight aspects of the sample of studies to be reviewed.

Chapter 3 will review those studies in which the independent variables were concerned with the child, either in terms of child presage characteristics or child behaviors.

Chapter 4 will review those studies in which the independent variables were concerned with the teacher, either in terms of teacher presage characteristics or in terms of teacher behaviors.

Chapter 5 will review those studies in which the independent variables related to some aspect of the setting.

Chapter 6 will analyse the studies reviewed, presenting possible reasons for the results of the review, and examining the studies reviewed from several perspectives so as to explore the meanings embedded within the research.

Chapter 7 will reflect upon what the review of research has to offer practicing classroom teachers.

The Appendices offer concise summations of the studies reviewed according to the independent and dependent variables considered.

CHAPTER II

AN INTEGRATIVE REVIEW -- THE PROCESS

As the purpose of this study was to conduct an integrative review of research literature dealing with classroom interactive processes in kindergarten and prekindergarten programs, this chapter describes the steps and processes followed in conducting such a review. Also to be discussed are certain general characteristics of the studies as a group, thus providing a broad conceptual base from which to consider the themes and relationships to be presented in later chapters.

Characteristics of an Integrative Review

Although reviews of literature of many types abound, few authors have actually addressed the technique or methodology used in conducting such a review. Jackson (1980) has delved quite thoroughly into what constitutes an integrative review and has suggested that the procedures used are not dissimilar to those used in conducting any piece of primary research. That is, Jackson (1980) has suggested that the following six basic steps be used in conducting an integrative review:

- (1) selecting the questions or hypotheses for the review,
- (2) sampling the research studies that are to be reviewed,
- (3) representing the characteristics of the studies and their findings, (4) analysing the findings, (5) interpreting the results, and (6) reporting the review. (p. 441)

The purpose of such a procedure ultimately would be to arrive at tentative generalizations based upon the material reviewed. Whether it will be possible, in the present study, to generate such generalizations is, of course, heavily dependent upon the commonalities or disparities

housed in the sample of studies itself. Perhaps, the most that can be attained is the construction of formative hypotheses upon which further efforts aimed at generalization may be based.

Selection of the Sample

Because a review of this nature constitutes investigation into an area which is unknown in terms of the breadth and scope of coverage in the research literature, the initial parameters of the study were not restricted to the prekindergarten and kindergarten, but, rather, encompassed the whole area of early childhood education--preschool to grade three. Because mini-computer searches on the SPIRES data base containing ERIC material failed to efficiently generate the types of studies required for the review, a hand search was conducted using the preschool to grade three criterion as well as the criteria that the research involve the conduct of observation in the natural setting. Within this broad frame of reference, the abstracts in the Current Index to Journals in Education and Resources in Education covering the time period from January 1975 through to January 1981 were scanned. This preliminary search gleaned over 750 possible items for review. These items were then subjected to a check in the original document to ensure that all the criteria were met. Slightly more than 400 of these were excluded from further consideration for the following reasons: (a) the article did not meet the criteria outlined; (b) the article was a review of literature itself; (c) the document was unavailable; or (d) the researchers did not report the age or grade level of the children involved in the study. Due to the number of studies remaining which did meet the criteria, as well as the need for a review of research in the prekindergarten and kindergarten areas, it was decided to limit the review to the kindergarten and pre kindergarten area, thus leaving

approximately 160 studies to be reviewed in the final sample.

Characteristics of the Sample

Age Range

While it may be conceived that the age range for a set of studies dealing with prekindergarten and kindergarten children should be obvious, this was not the case. Table 1 indicates the age ranges, as described by the authors of the studies, for the sample of studies to be reviewed. The lower age limit of the studies under review is 7 months, while the upper age limit is 10 years. In view of the fact that the review is supposed to be one of prekindergarten and kindergarten in which the upper age limit might be expected to be, at most, 72 months or 6 years, it is clear that the inclusion of studies involving a sample of children beyond the 6 year age limit would need some clarification.

Five studies involved children who surpassed the 6 year age limit-- Strayer, Strayer, Wareing, and Riusech (1977) 3-7 years, Leiter (1977) 4-8.94 years, Plummer (1977) 3-10 years, Hamilton and Gordon (1978) 56-78 months, and Oxford, Morrison, and McKenney (1979) 69-77 months. In all but Plummer (1977), the designation of "preschool" provided by the authors served as the justification for their inclusion in the sample. In the case of Plummer (1977), children in the sample were severely handicapped and developmentally delayed, and were being integrated into preschool programs despite the age difference. As well, twenty-seven studies did not provide the ages of children included in the sample, but classified the children under study as being in an infant-toddler program, a nursery program, a daycare program, a kindergarten program or a pre-school program. Finally, upon examining the group of studies as a whole, it is evident that all but 13 studies have included as part of the sample children in the two to five year range, thus giving some continuity to the sample as a whole.

Table 1
Age Range of Sample

| Age | No. of Studies | Age | No. of Studies |
|---------------------------|----------------|-----------------------|----------------|
| 12, 15, 18 mos. | 1 | 29-65 mos. | 1 |
| 7-31 mos. | 1 | 2 1/2 yrs. | 1 |
| 7.5 - 48.5 mos. | 1 | 30-34 mos. | 1 |
| 12-18 mos. | 1 | 2 1/2 - 3 and 4 yrs. | 1 |
| 12-36 mos. | 1 | 2 1/2 - 5 yrs. | 4 |
| 16 mos. | 2 | 30-62 mos. | 2 |
| 17-38 mos. | 1 | 31-64 mos. | 1 |
| 18 mos. (\bar{x}) | 1 | 2-9 - 4-5 yrs. | 1 |
| 18-22 mos. | 1 | 34-40 mos. | 1 |
| 18-24 mos. | 1 | 2.10 - 4.10 yrs. | 1 |
| 18-30 mos. | 1 | 34-66 mos. | 1 |
| 18.58 mos. | 1 | 34-58 mos. | 1 |
| 19 mos. | 1 | 2-10 - 5-12 yrs. | 2 |
| 19.2 mos. | 1 | 35 mos. (\bar{x}) | 1 |
| 20-40 mos. | 1 | 36-47 mos. | 1 |
| 20-48 mos. | 1 | 3 and 4 yrs. | 1 |
| 22-49 mos. | 1 | 3-4 yrs. | 7 |
| 2-6 yrs. | 1 | 36-50 mos. | 2 |
| 2-5 yrs. | 1 | 3-5 yrs. | 18 |
| 28-48 mos. | 1 | 36-59 mos. | 1 |
| 28-56 mos. | 1 | 3 - 5.6 yrs. | 1 |
| 2-4 - 4-5 yrs. | 1 | 3-6 yrs. | 2 |
| 2 yrs.4 mos.-5 yrs.4 mos. | 1 | 36-72 mos. | 1 |

Table 1 (continued)

Age Range of Sample

| Age | No. of Studies | Age | No. of Studies |
|----------------------------|-------------------|---------------------------|-------------------|
| 3-7 yrs. | 1 | 48-63 mos. | 2 |
| 3-10 yrs. | 1 | 4-6 yrs. | 1 |
| 37-54 mos. | 1 | 4 - 8.94 yrs. | 1 |
| 3 yrs.2 mos.-4 yrs.10 mos. | 1 | 49 mos. | 1 |
| 38-63 mos. | 1 | 49-59 mos. and 3-5 yrs. | 1 |
| 38-64 mos. | 1 | 4.1-5 yrs. | 1 |
| 3 1/2 yrs. | 2 | 51-60 mos. | 1 |
| 42-59 mos. | 1 | 51-63 mos. | 1 |
| 42-60 mos. | 1 | 4 yrs.3 mos.-5 yrs.4 mos. | 1 |
| 3 1/2 - 5 1/2 yrs. | 2 | 53-65 mos. | 1 |
| 42.8 - 42.9 mos. | 1 | 4 yrs.6 mos. | 1 |
| 3-9 - 4-7 yrs. | 1 | 54-89 mos. | 1 |
| 35, 39, 54, 63 mos. | 1 | 56 mos. | 1 |
| 3.8 - 4.2 yrs. | 1 | 4.8-5.8 yrs. | 1 |
| 44-53 mos. | 1 | 56-78 mos. | 1 |
| 3 yrs.9 mos.-4 yrs. | 1 | 4 yrs.11 mos.-5 yrs. | 1 |
| 3 yrs.9 mos.-4 yrs.6 mos. | 1 | 5 yrs. | 1 |
| 3 yrs.11 mos.-5 yrs. | 1 | 5-6 yrs. | 1 |
| 3 yrs.9 mos.-4 yrs. 4 mos. | 1 | 5 and 6 yrs | 1 |
| 47-63 mos. | 1 | 5.1 yrs. | 1 |
| 4 yrs. | 6 | 5 yrs.2 mos. | 1 |
| 4 and 5 yrs. | 2 | 5 1/2 - 6 yrs. | 1 |
| 4-5 yrs. | 1 | 66-72 mos. | 1 |

Table 1 (continued)
Age Range of Sample

| Age | No. of Studies | Age | No. of Studies |
|-----------------|----------------|-----|----------------|
| 66.6 mos. | 1 | | |
| 69-77 mos. | 1 | | |
| Kindergarten | 11 | | |
| K and Preschool | 1 | | |
| Preschool | 9 | | |
| Daycare | 2 | | |
| Nursery | 1 | | |
| Infant-Toddler | 1 | | |

Instrumentation

Several types of instrumentation were used in the studies to be reviewed. These were: (a) observation, (b) interviews, ratings and questionnaires, (c) affective/social measures and (d) performance/achievement measures. Details of their frequency of usage and characteristics of the instruments themselves will be presented in the next section.

Observation. Observation as a method of instrumentation in a study can take many forms. The value of observation as a method of instrumentation is that the observational technique can capture material which may escape psychometric testing and can be used with minimal infringement upon the natural setting. While the group of studies under review provides examples of many different types of observational techniques, it also provides evidence of particular preferences for specific observational techniques in the area of prekindergarten and kindergarten studies. The categories of observational instruments employed in the studies were: time sampling, event sampling, point sampling, scan sampling, ethnographic methods, use of video and/or audio equipment, narrative records, anecdotal records, specimen records, and "pre-packaged" instruments, or instruments devised by another researcher, which might involve one or more of the preceding techniques. Only one study (Stachel, 1980) did not provide enough information to determine which of these methods of observation was used.

The observational technique most frequently used by the researchers was that of time sampling. Time sampling essentially allows for the recording of the occurrence of predefined behaviors of interest during a specific time period (Irwin and Bushnell, 1980). Of the studies to be reviewed, 72 used a time sampling technique to investigate the

behaviors under consideration. This technique, while allowing for controlled recording of behaviors that occur within certain intervals of time, fragments the behavior into units of time rather than providing a continuous stream of behavioral description. Intervals used in the studies ranged from five seconds (Fagot, 1978) to five minutes (Strain, Kerr, and Alpher, 1979).

Two methods of observation used by researchers which are closely related to time sampling techniques are point sampling and scan sampling. Point sampling, used in two studies, is a variation of time sampling in which the behaviors are recorded on the point rather than within the interval, for example, behavior would be recorded every fifth second rather than for a continuous five second interval (Therrien, Note 2). The scan technique is another variation of the time sampling technique in which the room is scanned for an interval and behaviors or groupings are recorded in the next interval (Smith and Sydall, 1978b). This technique was used in four of the studies under review.

A method which appeared to be used fairly frequently by researchers was that of event sampling which focused upon the event or particular behavior rather than on the number of behaviors occurring within a specific time period. Event sampling, according to Irwin et al. (1980) can provide information on the duration and outcome of a behavior, thus providing a more continuous flow of information than time sampling. Twenty-nine of the studies to be reviewed used the event sampling technique as one of the observational techniques used in conducting the study.

A technique used by 17 of the researchers was that of video and/or audio recordings. While this technique has the advantage of freezing

an instant in time, it too has shortcomings. Problems, such as the camera angle and range influence the amount of data collected using the video technique, while audio recordings often have to be supplemented by observational data to identify the speakers and the context of the situation. Unlike the other observational techniques which may require "on-the-spot" coding, the video and audio techniques allow for coding after the fact and, of course, allow replays of behaviors which ensure stringent codings of the behaviors being observed.

The remaining cluster of observational techniques which did not use prepackaged instruments consists of 16 studies. Techniques used were quite varied and were used infrequently. Narrative records, verbal descriptions of a behavior as it is occurring, make up six of the 16 studies, while specimen records, quite similar to the narrative record but consisting of behavior episodes (Medinnus, 1976), comprise four of the 16 studies. Irwin et al. (1980) have suggested that while both of these methods provide a rich data base, they may provide problems in coding and are not as time efficient as event and time sampling, perhaps accounting for their limited use by researchers. Anecdotal records, used by one researcher, provide a good supplementary source of data, but do not provide the detail that event and time sampling supply. Anecdotal records may also lack a measure of objectivity which may be found in other observational methods as the time between observation and recording may be an influencing factor in what is remembered. Finally, three studies used a technique requiring both description and interpretation as the mechanisms for determining the underpinnings of the classroom structure--that of participant observation. Williamson, Karp, and Dalphin (1977) have suggested that, as a research technique, this method relies heavily upon the fieldworker's observations and

interpretations, however, the technique does provide a different manner of examining classroom life which focuses upon the social structures which are active in the classroom.

A common characteristic of all of the above methods, apart from the participant observation method and the narrative and specimen record methods, is that the researchers themselves designated the behaviors that were to be the focus of the study. In some cases coding was done instantly while in others it was done after the data were collected. The final group of studies to be presented in terms of the observational technique used is somewhat different in nature for while the authors may have selected the instrument to study the behaviors of interest, the instrument was created by another researcher. Twenty-six researchers used a "pre-packaged" observation instrument in conducting their research. Table 2 provides an outline of the studies in which such instrumentation was used and also indicates the instrument(s) selected. As the table indicates, 34 different instruments were used in the 26 different studies.

It is evident, therefore, that for the majority of the research which is to be reviewed, researchers conducted the observations with preformed observational category systems of many different varieties. Therefore, it is important to note that, for the most part, researchers were from the onset imposing a set of ideas regarding what was expected to happen upon the situations under investigation which by the nature of the observational categories were predefined before the research was conducted. The extent to which such predefinitions of expectations influenced the results reported is naturally dependent on the degree to which those definitions departed from the actual occurrences in the

Table 2
Pre-Packaged Observation Instruments

| Author(s) | Observation Instrument Used |
|------------------------------------|---|
| Becher (1978) | -Observation System for Instructional Analysis |
| Beehler (1974) | -Social Interaction Observation System |
| Cochran (1977) | -Quantitative Analysis Scale -Caregiver Child Interaction Scale |
| Cooper (1979) | -APPROACH Scale |
| Edwards and Montemurro (1979) | -Coping Analysis Schedule for Educational Settings |
| Etaugh, Collins, and Gerson (1975) | -Fagot-Patterson Scale modification |
| Fagot (1977a, 1977b, 1977c) | -Fagot-Patterson Scale |
| Firestone and Brody (1975) | -Flanders Interaction System (modified) |
| Jakob and Dickerschied (1976) | -Social Behavior Checklist |
| Johnson, Ershler, and Bell (1980) | -Parten's Social Play Categories -Smilansky's Cognitive Play Categories |
| Johnson (1979) | -Instrument for Quantitative Analysis of Tasks on One-to-Six Year Old Children (modification) |
| Kennedy (1976) | -Clifton (1944) form of the Anderson (1945) observation system |

Table 2 (continued)
Pre-Packaged Observation Instruments

| Author(s) | Observation Instrument Used |
|---------------------------------------|--|
| Kohn and Parnes (1974) | -Social Competence Scale Problem Checklist |
| Leiter (1977) | -Social Interaction Profile |
| Montemurro (1980) | -Coping Analysis Schedule for Educational Settings |
| Morrison and Oxford (1978) | -Schedule for Classroom Activity Norms -Classroom Ecology Scale |
| Murphy and Goldner (1976) | -Social Interaction Observation method (LeBlanc) |
| Oxford, Morrison, and McKenney (1979) | -Schedule for Classroom Activity Norms -Classroom Ecology Scale |
| Perry (undated) | -Flanders Interaction System |
| Robinson (1977) | -Fagot-Patterson Scale |
| Shapiro (1975a) | -Classroom Observation Scale |
| Silberman (1975) | -Infant/Toddler Interaction and Activity Profile |
| Slaby and Crowley (1977) | -Behavioral Observation Scoring System |
| Taylor (1975) | -Observational Schedule and Record |
| Travers, Coelon, and Ruopp (1977) | -SRI Focus Observation Instrument -Physical Environment Inventory |

Table 2 (continued)
Pre-Packaged Observation Instruments

| Author(s) | Observation Instrument Used |
|--------------------------|---|
| Wilton and Densem (1977) | -Classroom Snapshot |
| | -Five Minute Interaction |
| | -Prescott-SRI Child Focus Observa- tion Instrument |
| | -Parten Scale of Social Partici- pation |

classrooms. Furthermore, while for most researchers, those pre-definitions also serve as the coding mechanism for the data, for several researchers, another instrument was used to code the data, thus further removing the data from the context of the real situation. Solutions to this dilemma might be provided in the use of narrative and specimen records, but these methods are fraught with other difficulties, as has been previously indicated. The alternative, then, is to consider the research which has been produced in light of the shortcomings which have been outlined.

Other methods of instrumentation. In view of the fact that use of observation as one of the instruments for conducting research was one of the criteria for selection of the studies to be reviewed, it, perhaps, should not be surprising that slightly less than two thirds of the studies used no other source of instrumentation in collecting data. The three major types of instrumentation used in addition to observational instruments were: (a) ratings, questionnaires and interviews, (b) affective or social measures, and (c) performance or achievement measures. In general these measures were used to either provide initial screening information on the children or teachers to be studied or they were used to examine the relationship between observational data collected and the measures themselves.

Thirty-three studies supplemented observational data collection through the use of questionnaires, ratings or interviews. Of these 33 studies, eight also used additional sources of instrumentation such as affective/social measures or performance/achievement measures. The rating/questionnaire/interview measures spanned a variety of topics ranging from teacher ratings of a child's future success (Kennedy, 1976), to attitudes towards integration of handicapped children in

regular preschool classes (Plummer, 1977), to a child's impressions of what constitutes work and what constitutes play (King, 1979).

Social/affective measures were fairly broad in scope as well. Role taking measures, measures of sex-stereotypic behaviors, measures of social competency, and measures of behaviors such as apathy, withdrawal, task persistence, delay of gratification, and attitudes toward older adults are examples of the types of measures housed under this category as Table 3 indicates. Of the 20 studies using social/affective measures, 10 studies used other instrumentation in addition to the social/affective measures and observation.

Performance/achievement measures were used in combination with another method of instrumentation other than observation in 13 of the studies to be reviewed and were used as the sole complement to observation measures in 11 of the studies to be reviewed. Typically, the performance achievement measures consisted of subtests of standardized intelligence tests, were measures of the performance of particular tasks such as repetition of English language phrases or drawing tasks, or required analytical thinking in the performance of a task. Table 4 outlines the specific performance/achievement measures used by researchers in conducting the studies. A measure used in two of the studies was that of area mapping which is closely tied in to observational techniques in that it is the environment which is being observed and coded rather than people.

It is interesting to contrast the percentage of studies using achievement/performance measures and affective/social measures in light of the comment made by Brophy (Note 1) that "cognitive measures of preschool children are considerably less reliable than comparable cognitive measures for older children and so called affective measures are

Table 3
Social/Affective Measures

| Author(s) | Measures Used |
|-------------------------------|--|
| Beller (1974) | -Trust and Persistence Tasks |
| Castle and Richards (1979) | -Perceptual Role Taking Tasks (Flavell) -Cognitive Role Taking Tasks (Mossler <u>et al.</u>) -Affective Role Taking Tasks (Bocher <u>et al.</u>) |
| Carter (1977) | -Sociometric test |
| Deutsch (1974) | -Picture sociometric -Role taking task |
| Firestone and Brody (1975) | -Primary Academic Sentiment Scale |
| Gottman (1977) | -Sociometric measure |
| Gunnarsson (1978) | -Doll play dilemmas |
| Jakob and Dickerschied (1976) | -Role taking (Urberg & Docherty) |
| Jennings (1975) | -It Scale -Institute for Personality and Abilities Testing -Irvan and Moores moral judgement stories -Flavell <u>et al.</u> role taking tasks -Devries test of role taking skill -Borkes test of interpersonal perception -Sociometric measure |

Table 3 (continued)
Social/Affective Measures

| Author(s) | Measures Used |
|---|---|
| Kerschner (1977) | -Preschool Racial Attitude Measure (modified) |
| Mathis and Oyemade (1976) | -Thomas Self Concept Value Test -Toy preference test -Stephens-Dely's Reinforcement Contingency Interview -Reifer Roberts Response Hierarchy Instrument -Matching Familiar Figures Test |
| Ragozin (1975, 1980) | -Strange Situation Test |
| Robinson (1977) | -Adjective Checklist |
| Seegmiller (1977) | -Draw a person test -Differential Memory for Masculine and Feminine Items-Nadleman Recall Test -Delucia's Toy Preference Test -It test -Occupational Preference test |
| Smith and Sydall (1978b) | -Role taking tasks |
| Stachel (1980) | -Attitudinal and Interpersonal Relationship measures (not specified) |
| Taylor (1975) | -Behavioral Maturity Scale |
| Toner, Holstein, and Heatherington (1977) | -Simplified Matching Familiar Figures Test |

Table 3 (continued)
Social/Affective Measures

| Author(s) | Measures Used |
|-----------------------------------|---|
| | -Draw a Line and Walk a Line Test |
| | -Maintenance of delay of gratification task |
| | -Choice of delay of gratification task |
| | -Resistance to temptation tasks |
| Travers, Coelon, and Ruopp (1977) | -Matching Familiar Figures Test |
| | -Motor Inhibition Test |
| | -Pupil Observation Checklist |
| | -Schafer Day Care Behavior Inventory |
| | -Kohn-Rosman Problem Checklist |
| | -Kohn-Rosman Social Competence Scale |
| | -Vineland Social Maturity Scale |
| Wishon and Spangler (1979) | -Sociometric measure |

Table 4
Performance/Achievement Measures

| Author(s) | Name of Measure Used | Age of Children |
|-------------------------------|--|---------------------|
| Austin (1971) | -Preschool Embedded Figures Test | 3 1/2-5 yrs. |
| | -Block Design of WPPSI | |
| Becher (1978) | -Mathematics Achievement Test | 4 and 5 yrs. |
| Beller (1974) | -Bailey Infant Scale | 20-23, 32-40 mos. |
| | -Stanford Binet | |
| Cochran (1977) | -Griffiths Mental Development Scale | 12,15, 18 mos. |
| Firestone and Brody (1975) | -Lorge Thorndike Form A IQ | 5-6 yrs. |
| | -Metropolitan Achievement Test | |
| Gunnarsson (1978) | -Griffiths Mental Development Scale | 12-18 mos. |
| Hamilton and Gordon (1978) | -Block Design WISC | 56-78 mos. |
| Jacob and Dickerschied (1976) | -Denver Developmental Screenint Test | 3-5 yrs. |
| Jennings (1975) | -Subtests of WPPSI | 4 yrs.3m.-5 yrs.4m. |
| | -Meyers Dingman Orpet Sitkei and Walls | |

Table 4 (continued)
Performance/Achievement Measures

| Author(s) | Name of Measure Used | Age of Children |
|---------------------------------------|--|---------------------|
| Jennings (1975) | -Test of Object Classification -Classification Test | |
| Karlson and Stodolsky (1973) | -WPPSI | preschool |
| | -Stanford-Binet LM | |
| | -Merrill Palmer | |
| | -Piagetian conservation task | preschool |
| Larsen (1975) | | |
| Mathis and Oyemade (1976) | -Stanford Binet LM | 3 yrs.9m.-4 yrs.4m. |
| Mays (1974) | -Standard English Repetition Test | kindergarten |
| Seegmiller (1977) | -PPVT | 3,4, 5 yrs. |
| Smith and Sydal (1978b) | -Reynell Language Development Scale | 3-4 yrs. |
| | -Caldwell Co-op Preschool Inventory | |
| | -Goodenough-Harris Draw-a-Man | |
| | -Dog and Bone Test of Creativity | |
| Smith, Dalglush, and Heiznark (1978a) | -WPPSI subscales | nursery |

Table 4 (continued)
Performance/Achievement Measures

| Author(s) | Name of Measure Used | Age of Children |
|--|---|-----------------|
| Stachel (1980) | -Student achievement measures (not specified) | kindergarten |
| | -Assessment of Children's Language Comprehension Test | daycare |
| | -Behavioral Maturity Scale | |
| | -PPVT | |
| | -Reynell Language development scale | 3-4 yrs. |
| Tizard, Philips, and Plewis (1976) | -Minnesota Non-verbal Intelligence scale | |
| | -PPVT Form B | 36-64 mos. |
| | -Preschool Inventory | 3-4 yrs. |
| Toner, Holstein, and Hetherington (1977) | -McCarthy Scale of Verbal Memory | |
| | -Lantz Scale | preschool |
| | -English Picture Vocabulary Test | |
| Travers, Coelon, and Ruopp (1977) | -Shaftel Photo Problems | 49 mos. |
| | -Similarities Test | |
| Turner (1978) | | |
| Turner and Durrett (1975) | | |

virtually useless, in my opinion." Of the studies to be reviewed, 13 percent used affective/social measures while 15 percent used performance/achievement measures, thus indicating a somewhat marginal use of both types of measures in the research conducted involving young children. While the low predictive value of early developmental scales has been generally established, thus supporting Brophy's (Note 1) contention, it has also been asserted that "low scores are more diagnostic than high ones, since they often result from prematurity or brain damage" (Vernon, 1979, p. 73). Vernon (1979) has also suggested that early developmental scales measure different aspects of development such as sensorimotor and language skills, thus accounting for the low predictability of these measures and has indicated that the predictability of such scales improves greatly when the child reaches the age of four. Thus studies including performance/achievement measures should be considered in terms of the validity and reliability of the information they may contribute to the overall picture of the child's development. As for social/affective measures, it appears that these are used even less frequently than performance/achievement measures, and while perhaps being "useless" in Brophy's (Note 1) opinion, especially in terms of the measurement of instructional outcomes, they do contribute another fragment which may help to construct a picture of what goes on in classrooms.

"Naturalness" of Settings

The distinction between what constitutes or does not constitute a natural setting is a fine one. For the purposes of this review, the natural setting has several facets. The sample of studies to be reviewed could primarily be characterized as studies in which children had participated in a group setting which was part of a preschool, kindergarten, daycare, nursery, or infant-toddler program, or studies

in which play groups, operating for periods of several weeks or more, had been formed. For the greater proportion of the studies (91 studies --57%), this was the sole characteristic of the "natural setting." For another 38 of the studies (24%), children were observed in the natural classroom setting, but had to leave the classroom at some point in the study to be tested or interviewed. For the remaining 30 of the studies (19%), interventions, merged into the realm of regular classroom procedure, occurred within the context of the natural classroom setting. Common examples of such interventions were manipulation of the physical environment, manipulation of the ratio of adults to children, and manipulation of the teacher feedback to children through instructions given the teacher. Thus, the common link between all the studies is that they were field studies employing observational methods to collect data in the natural classroom setting.

Variables Included in the Studies

To get at further salient features of the studies as a group, a process of variable sorting was undertaken. That is, the key independent and dependent variables of each study or the variables of interest in descriptive and correlational studies were charted in order to determine what commonalities, if any, existed among the studies. After this process was completed, each of the independent variables was then matched to corresponding dependent variables across studies and miniature summations of the principal results of this across-study variable matching were charted. Appendix A shows the results of this process.

It should be noted that because the studies to be reviewed involved the use of observation in natural settings, independent variables were rarely truly manipulated, except in the case of the intervention studies. As well, summations for correlational or

descriptive studies are included in the tables presented in Appendix A although no independent/dependent variable type relationship is assumed for the variables considered in these studies.

While some variables may have been overlooked in the process of variable sorting, the tables in Appendix A provide the principal results of the amalgamation of the 159 studies under review. Approximately 85 independent variables have been highlighted in Appendix A and, in total, over 600 relationships of independent/dependent variables or descriptive statements regarding a variable are presented in the tables in Appendix A. In some senses, the summations may not do justice to each study as a separate entity, especially when considering that reports of studies ranged from one to over 400 pages, however, it must also be remembered that the purpose of the present review is to arrive at themes or to ferret out the commonalities in the focus of the studies as a whole rather than to delineate the differences.

Summary

This chapter has examined the technique for conducting an integrative review and has outlined some of the processes used in conducting the present review. As well, characteristics of the sample of the studies to be reviewed were noted. The remaining steps in the integrative review procedure--reporting of the findings and analysis and interpretations of those findings--will be presented in the chapters which follow.

In general the following trends in the characteristics of the studies under review emerged. (a) The age range of the children in the sample of studies was quite broad--7 months to 10 years--but tended to cluster around the 2 to 5 year age range. Only a few researchers' studied the very young--less than 12 months--thus

suggesting a gap in the research literature in this area. (b) Use of observational instruments was quite varied, however there was a pre-dominant pattern of preference for the time sampling procedure as an observational tool. In those studies using prepackaged instruments for observation, there appeared to be no strong preferences in the selection of instrumentation used. (c) Most studies used observation as the sole instrument for data collection. (d) Little preference for particular social/affective measures was apparent as was the case for the performance/achievement measures. (e) Performance/achievement measures appeared to be used predominantly with children who were three or older, thus enhancing their chances at predictability of future performance or achievement. (f) Typically, researchers kept to a minimum the amount of infringement that the research might have upon the setting with the majority of studies involving no other infringement than observer presence or the presence of video/audio equipment.

CHAPTER III

THE CHILD

The three key components in the classroom setting are the setting characteristics themselves, the adult and the child. This chapter will review the studies selected in an attempt to examine that facet of classroom life dealing with the child. The independent variables that will be considered are essentially of two types--(a) child presage characteristics and (b) child behaviors within the setting. These two major groupings of variables will be considered in terms of the effect they have upon the teacher's behavior, children's behavior and the adult-child interaction in the setting.

Child Presage Characteristics

Child presage characteristics as characterized by Dunkin et al. (1974) are essentially characteristics that the child brings with him to the setting. While some characteristics such as age or attractiveness are virtually unalterable, others such as an isolate or non-isolate child may be able to be altered in the setting. The tables in Appendix A present twenty different child presage variables each in relation to from one to over 70 dependent variables. This section will discuss the relationships among the independent and dependent variables related to child presage characteristics.

Sex of Child

The presage characteristic of sex of the child was very frequently considered by researchers perhaps due to the relative simplicity in its definition and operationalization. Over 70 dependent relationships are indicated by the tables in Appendix A, the majority of which concern the

child's behavior in the classroom as related to gender. General findings of the studies and a broad analysis of what the studies have to offer as a group will be presented in relation to the clusters of dependent variables which exist. Because of the large number of dependent variables having to deal with the child's behavior, these variables will be further subgrouped around several broad themes so as to simplify the presentation --play, language, operation in the physical setting, academic aspects of the setting, affective aspects of the setting and social interactions-- whereas teacher behavior and adult/child interaction variables will not be subgrouped. While some overlap may exist in the clustering of the dependent variables, the goal is not to deal with strict categories of behavior, but rather, is to convey the essence of the studies by imposing a minimal framework in which to consider them.

Play. For studies in which a particular type of play behavior was an aspect of the child's behavior, a strong trend tended to appear in which there were few differences between sexes for the proportion of time engaged in a specific type of play behavior. Strongest evidence for this surfaced in make-believe or fantasy play in which studies by Brenner (1976), Field (1980), Friedrich-Cofer, Huston-Stein, Kipnis, Susman, and Clewett (1979) and Johnson, Ershler, and Bell (1980) found no differences in the overall amount of fantasy play engaged in by members of either sex. Parallel play followed a similar pattern with no differences between sexes noted by Johnson et al. (1980), Fagot (1980), Fagot (1977c), and Field (1980), however, Feldbaum, Christenson, and O'Neal (1980) found an interaction effect between gender and newcomer/tenured status of a child. While the trend for no differences between sexes again appeared in the tenured or host children, when newcomer children were considered, males exhibited a higher frequency of parallel

play than females. Similarly, when examining time alone or solitary play, Fagot (1977c), Johnson et al. (1980), Fagot (1978) and Field (1980) found no differences between sexes in the amounts of solitary play while Feldbaum et al. (1980) noted that female newcomers spent more time alone than male newcomers. However, although these three types of play appear to have a definite trend towards exhibiting no differences between the sexes, they should not be considered in isolation but should be contrasted with other types of social and cognitive play.

Differences between sexes were less clear for cooperative play which may be considered a higher level of social play. While Field (1980) and Serbin, Tonick, and Sternglanz (1977) found that females engaged in a greater frequency of cooperative play behavior, Gunnarsson (1978), when examining the differences between children in home care and center care, found that males in centers exhibited a greater amount of cooperative play behavior than males reared at home or females in either home or center care. Thus, while it may appear that differences could be setting specific, it is noteworthy that Gunnarsson was dealing with a sample of Swedish children of five and a half years, Field (1980) was studying three and four year olds and Serbin et al. (1977) was studying four and five year olds. Therefore, it may be plausible to suggest that age or cultural factors may account for the differences found in cooperative play behaviors between sexes. Brown and Peters (1979), however, noted that neither age (in this case three to five years) nor sex appeared to account for differences in the levels of social play for nonhandicapped children.

When contrasting yet two more types of social play behavior, non-involved and involved looking, Field (1980) found no differences between sexes for these two particular play behavior types while Inoff and

Halverson (1977), in examination of factor scores based upon a factor analysis, found that, for females, the amount of inactive behavior or passive watching was marginally related to the total number of child initiations. The overall suggestion that could be gleaned from both the noninvolved and involved looking as well as cooperative play is that other factors impinge upon the variable of sex of the child to create interrelationships between it and other variables, while for solitary and parallel play, the variable of the child's sex alone can account for particular play patterns.

Two types of play involving less of a social aspect and more of a cognitive aspect are role play and exploratory play behavior. Gunnarsson (1978) noted a higher incidence of role play in females while no differences between males and females were found by Brenner (1976) for exploratory play. Because of the low incidence of studies involving either of these types of play, it is not possible to produce any comment which might serve to generally characterize either of these two types of play in relation to the sex of the child, however, it is noteworthy that the pattern of no differences between the sexes for fantasy play resurfaced for exploratory play. Inasmuch as role play might be considered a subset of fantasy play, the higher incidence of this type of play in females found by Gunnarsson (1978) might be hidden under the broad fantasy play category and thus could prove to be worthy of further investigation.

Finally, when considering children's preferences regarding seasonal play, Harper and Sanders (1975) reported a strong trend for males, regardless of season, to prefer outdoor to indoor play, while for females this pattern was reversed. Once again, with only one study examining this particular play preference, little comment can be made

other than to report the results, however this particular play preference of indoor/outdoor play will be discussed in more detail with regard to sex-stereotypic behavior in the next section which examines the child's operation in the physical setting.

Operation in the physical setting. Studies to be reported upon in this section generally reflect the child's behavior in relation to specific settings in the context of the classroom or the physical environment of the classroom as a whole. The theme of sex-stereotypic setting/behavior choices is recurrent through this particular selection of studies whether the frequency of the use of particular areas by children of either sex was considered or whether the focus was on behavior that was more typical of one sex than the other.

In terms of area use, equipment use, and the use of space within the classroom, definite preference trends appear for both males and females. The following distinct preferences were found for males: blocks (Fagot, 1977a, 1977b; Karlson, 1973; Berk, 1973; Tyler, 1975), outside play (Fagot, 1975, 1977b; Field, 1980; Harper et al. 1975), hammer and saw type construction work (Fagot, 1977a, 1977b; Etaugh, Collins, and Gerson, 1975; Karlson, 1973), transportation toys (Fagot, 1975, 1977a, 1977b; Harper et al. 1975; Tizard et al. 1976; Etaugh et al. 1975), wheeled vehicles (Fagot, 1975; Tizard et al. 1976), and sandbox (Fagot, 1975, 1977a). For females the following preferences were quite evident: dolls (Fagot, 1975, 1977a, 1977b; Tizard et al. 1976; Field, 1980), kitchen (Fagot, 1975, 1977a, 1977b; Karlson, 1973; Harper et al. 1975; Tizard et al. 1976; Tyler, 1975), indoor play (Harper et al. 1975), reading/puzzles/music area and art/science/gym area (Field, 1980), reading books and listening to stories (Etaugh et al. 1975) and helping the teacher (Etaugh et al. 1975). Eisenberg-berg, Boothby, and Matson

(1979a) in a correlational study, noted a strong relationship between height and weight and preference for masculine toys, except for young girls, however, the preceding studies do not shed any light on the extensibility of this relationship. For most of the above preferences no evidence to the contrary existed in the literature, but contradictions did exist regarding the preferences for the use of the climbing apparatus and for participation in art activities.

Fagot (1975, 1977a, 1977b), Field (1980), Harper et al. (1975) and Etaugh et al. (1975) all found that females made the greater use of the arts and crafts area while in the case of Tyler (1975), males predominantly used the easel area whereas females used the other art area and in a study by Karlson (1973), no differences between males and females surfaced in behavior in art or sociodramatic play. In the case of Tyler (1975) a possible explanation might lie in the existence of two art areas, however not enough information was reported to make the comparison across groups.

Another discrepancy existing in the literature involves the use of fixed equipment such as climbing structures. Harper et al. (1975) indicated a clear male preference for the use of such equipment while Tizard et al. (1976) reported that the preference lies with females for the use of climbing frames. Accounting for such differences may be as simple as attributing the difference to cross-cultural preference as the Tizard et al. (1976) study was conducted in Britain, however, much more research would have to be done to attempt to validate such an assumption. On the whole, the strong preference patterns that have emerged lend support to a somewhat culturally value-laden summary statement made by Lamb and Roopnarine (1979) which concluded, based upon Lamb et al.'s research, that in general males exhibited typical masculine

patterns while females exhibited typical female patterns of activity selection.

Not only do patterns emerge for the use of a setting, but Brenner (1976) noted that males and females may use a setting for different purposes. While the male children used the least structured setting for make believe activities, females used it for exploring. Eson, Cometa, Allen, and Henel (1977) found that the setting's inherent familiarity/novelty characteristics or activity/passivity characteristics did not appear to differentially affect male and female use of a setting. Contradictory evidence surfaced over the amount of area a child covered, with Austin (1971) suggesting that no differences existed between the sexes while Harper et al. (1975) reported that males used more area and space.

While the selection of a setting may be typified as being masculine or feminine, so too can behaviors. High activity level, level of participation while under teacher direction, passive/active behavior, and aggression are among the behaviors that may be typified as masculine or feminine behaviors.

While Travers et al. (1977) reported no difference between males and females in active involvement in a setting, Fagot (1978) found that males received more positive comments from teachers for high activity levels than females, thus suggesting a definite preference for behavior-types for each sex from the point of view of the teacher. Fagot (1979) also noted a similar trend. Somewhat related to overall high or low activity levels is also the rate of participation in high or low structure (teacher-led) settings. A disagreement in the research again emerges, with Carpenter (1979) finding that males participate more in low structure and that females participate more in high structure

settings (Carpenter, Huston-Stein, and Baer, 1978), while Huston-Stein, Friedrich-Cofer, and Susman (1977) reported no differences in participation rate between the sexes for teacher-led instruction.

A clear pattern is generated by the literature on aggression, with the preponderance of studies finding that aggressive behavior was more frequently observed in males (Seegmiller, 1977; Serbin, O'Leary, Kent, and Tonick, 1973; Smith and Green, 1975; Tizard et al. 1976; Travers et al. 1977; Tyler and Dittmann, 1980; Berk, 1973; Fagot, 1975) and a smaller proportion indicating no differences between children on aggressive behavior (Fagot, 1977c; Friedrich-Cofer et al. 1979; Missikian and Hamer, 1974; Shantz and Schomer, 1978; Peck and Goldman, 1978b). The division in the research literature in this case may perhaps lie in the definitional area although there would appear to be a good deal of similarity regarding what constitutes aggression in the material presented. Whatever the reason behind the lack of consensus, it is apparent that a semi-consensus may be reached inasmuch as the research demonstrates that aggressive behavior is either more frequently occurring in males or no differences exist between the sexes on this variable.

In general, then, strong setting preference behaviors for children of different sexes are evident while shadows of behaviors such as the level of participation are beginning to take shape but require much more substance in the form of research before definitive trends can be established.

Child social interactions. Insofar as some aspects of behaviors such as aggression are somewhat concerned with the interactive process, they could justifiably be presented in this section, however since these variables have been discussed in preceding sections, they will be excluded from further discussion. The socially interactive process

itself can be broken down into three aspects--the initiations of those social contacts, the contacts themselves and responses of peers to the child's behavior. These aspects will be examined to determine if the sex of the child might differentially affect the manner in which either of these aspects is performed.

In terms of the initiation of social interactions, the literature reviewed had little to offer except conflicting suggestions based upon individual research efforts. In reporting the results of a correlational study, Inoff et al. (1977) noted that for males the total child initiations was positively related to peer involvement but for females was marginally related to inactive passive watching. Berk (1973) found that males tended to be coercive in dealing with peers in general, for example they would initiate attacks, whereas girls were more likely to send out more requests to children. Field (1980) reported that males initiated contacts significantly more often than females and noted a classroom by sex interaction in which girls in an open design room with a 1:4 ratio initiated contacts less frequently than girls or boys in the high or low ratio for partitioned classrooms and those in the open classroom with a 1:12 ratio. Upon scanning the three studies, it is evident that in each case the authors are dealing with slightly differing aspects of the child social initiation process, thus making cross-study comparison virtually impossible and leaving a gap in the literature.

Field's (1980) work indicated that children typically interacted with the same sex classmates. Mays (1974) also gives further evidence for same sex preferences in social interactions among young children and Marcus (1977) reported that reciprocity or mutual helping behavior tended to be given between children of the same sex. Social inter-

actions themselves appeared not to differ between sexes according to Brown et al. (1974), Oxford et al. (1979), Peck et al. (1978b), Howes and Rubenstein (1978a) and Rubin (1976). Fagot (1977c) also indicated that no differences existed in the amount of positive or negative social interaction contacts between the sexes. Unfortunately, from the point of view of gleaning consensus from the literature, reports of results at variance to those previously cited were evident in the literature for both social interaction in general and for positive/negative social interaction contacts.

Travers et al. (1977), in reporting the results of a national study done in the United States, indicated that females showed a slightly greater amount of social interaction while Field (1980) and Murphy et al. (1976) found that males were involved in more social interactions. Gunnarsson (1978), although not contrasting males and females directly, noted that males in daycare centers were involved in more social interaction episodes than males in homes, but for females, no differences were found in the amount of social interaction in homes as opposed to the centers.

Yet, in a slightly different vein, Berk (1973) reported that the methods used in interactions differed between sexes, with males using fewer verbal methods than females and males receiving more blocking behaviors from other children. This greater number of blocks received by males from other children could be related to their tendency towards aggressive behavior as alluded to previously and also to a tendency to engage in more negative interactions on the whole as contrasted to females. Studies done by Reuter and Yunik (1973), Tizard et al. (1976), Tyler et al. (1980) and Berk (1973) would tend to support this suggestion, yet no differences in prosocial behaviors were found to exist between the

sexes by Eisenberg-berg and Hand (1979c), Fagot (1977c), and Friedrich-Cofer et al. (1979). Shantz et al. (1978), in probing the area a little further, found that the composition of the group was a contributing factor in negative interactions for children. According to Shantz et al. (1978) more conflicts would occur in mixed sex or all-girl dyads than in all-male dyads. To add a final piece to the puzzle, Eisenberg-berg et al. (1979a), in a correlational study, reported that while the amount of interaction differed from males and females who were four years old, this was not the case for younger children. The findings of Howes et al. (1978a), and Murphy et al. (1976) would lend credence to Eisenberg-berg et al.'s report, however, Oxford et al. (1979) and Peck et al. (1978b) found no differences for older children of kindergarten age as well. For the remaining studies--Brown et al. (1979), Field (1980), Gunnarsson (1978) and Travers et al. (1977)--a comparison cannot justifiably be made because these researchers generally used a combined age group to conduct research.

In an attempt to examine the overall propensity for children to relate to and interact with people as opposed to objects, Jennings (1975, 1977) found no differences between the sexes. No difference between the sexes was reported for sharing/defending behavior in young children as well. Because of the explicitness of the nature of the two studies, and the fact that they are the sole studies in a specific area, little in the way of a group analysis can be conducted.

The final aspect of the child's social interactions to be considered is that of responses made by peers to the social behaviors of children. The pattern here is fairly clear. Peers tend to reinforce males for masculine behaviors (Fagot 1978, Lamb et al. 1979) while criticizing or negatively reinforcing males for opposite sex behavior

(Fagot 1977a, 1979). Peer punishment of behaviors was rare and no differences between males and females were observed either as a dispenser or a receiver of peer punishment. The correlational work done by Eisenberg-berg et al. (1977a) receives some support from these findings in so far as while, for females, preference for masculine toys was related to higher incidence of interaction with boys, it was marginally negatively correlated with interactions with girls.

As a group, then, the studies involving child social interactions in relation to the sex of the child begin to offer some insights into interactive processes in the classroom but few definitive patterns emerge except for the reinforcement of sex-stereotypic behavior patterns by peers.

Language. An aspect closely allied to social interactive skills in the classroom setting is the use of language. For example, Deutsch (1974) found in a correlational study that communicative egocentrism was related to the amount of social interaction in females. Interestingly enough, Peck et al. (1978b), and Rubin (1976) found no differences in the amount of egocentric speech communications between the sexes, thus bringing into play the question of why the relationship existed only for females.

While Cooper (1979) reported no overall differences in the language used by either sex, Borman (1977) found that the type of program (traditional or open) interacted with the sex of the child to produce varying patterns in varying settings. In a descriptive study, Mays (1974) found a fairly equal proportion of high male and female verbalizers and a distinct trend for children to talk to the same sex pairs. Lovinger (1974) noted no differences between male and female performance on the verbal expression subtest of the ITPA, however, with

adult intervention in sociodramatic play, boys became superior to girls receiving the same intervention strategy.

With regard to vocalization to the teacher, Berk (1973) reported no overall differences in the frequency of vocalization for either sex while Cooper (1979) found that males tended to vocalize more in adult presence. Cooper (1979) also noted a significant tendency for vocalization to peers to drop off and vocalization to adults to increase in adult presence.

From this assortment of work, there is a pattern for no overall difference in language use between the sexes to surface, however, when examined on a more detailed level, differences worthy of further investigatory pursuit appear.

Affective behavior. As a whole, the studies dealing with affective aspects of the child's behavior in the context of the classroom generally are a widely diverse collection of studies with few commonalities other than the fact that they can mutually be classified as affective behaviors. Because of the diversity contained within this group, the studies will be reported but no attempt will be made at analysis or synthesis.

No differences between sexes were reported for apathy/withdrawal (Travers et al. 1977), interest/participation (Travers et al. 1977) or the Primary Academic Sentiment Scale (Firestone et al. 1978). Travers et al. (1977) reported that females were higher on cooperation/compliance while Seegmiller (1977) reported no difference between the sexes. Males were found to be higher on anger/hostility (Travers et al. 1977) and females on self-control (Toner et al. 1977). Finally, Sherman (1975) noted that the phenomenon of group glee was more often in evidence in mixed sex as opposed to same sex groups.

Academic behaviors. This group of studies concentrated upon the academic related behaviors of children. Highlighted will be behaviors relating to task performance which may be considered an attitude towards performance, and performance will also be considered.

Although task performance was found to be either higher in females (Travers et al. 1977; Krantz and Scarth, 1979) or no differences favoring either sex were found (Oxford et al. 1979) it is interesting to find that only males were rewarded for high task interest (Fagot, 1979) or for engaging in complex tasks (Fagot, 1978). Whether this reward pattern by teachers is geared toward increasing these behaviors in males because of their low frequency is, of course, mere speculation, however, the lack of encouragement for females to engage in such behaviors is notable. Feldbaum et al. (1980) also found an interaction effect occurring for non-synchronous task behaviors in terms of the sex of the child and the child's newcomer/tenured status. According to Feldbaum et al.'s (1980) report, newcomer females engaged in non-synchronous on-task behaviors for a longer period than males who changed more quickly to synchronous on-task behaviors.

In terms of performance measures, no differences were noted between the sexes on performance on the ITPA (Lovinger, 1974) the WPPSI (Karlson et al. 1973) or on quality of drawing tasks (Turner, 1978). No significant difference between sexes was also reported by Firestone et al. (1978) on IQ or the Metropolitan Achievement Test except for the reading subscales in which the females performed better than males. In both motor testing and the completion of a Piagetian task, females showed gains with increased teacher support (Larsen, 1975), however, Geller, Geller, and Serbin (1975) found that all children increased

attending behaviors except for girls who had been exposed to a contingent social reinforcement condition. Perhaps the slight contradiction here may be due to the nature of the task to be performed, nevertheless, it would appear that teacher contingent reinforcement may be operating differently for males than females. This topic will be addressed more directly in the next section dealing with teacher behavior.

Teacher behaviors. Teacher behaviors directed toward children of different sexes may be as varying as the child behaviors which have been previously outlined. Behaviors will be discussed in two broad groupings--those behaviors which the teachers direct towards the children and those behaviors which involve a response on the teacher's part to the behavior emitted.

As with the preceding literature on child behavior, literature on teacher social contacts is not in total agreement. While Appleford, Fralick, and Ryan (1976) reported a higher frequency of teacher contacts with girls, Serbin et al. (1973) and Murphy et al. (1976) found that this was the case for boys. In one school in which Appleford et al. (1976) conducted their research, no differences between the sexes were found for the number of contacts boys received, as was also the case in Cooper's (1979) study. Fagot (1977b) reported that both the sex and experience of the teacher interacted with the sex of the child to produce varying results, however, in general, teachers tended to join the play of boys more. A similar pattern was also in evidence for instructional contacts with Appleford et al. (1976) and Fagot (1973) reporting a higher frequency of contacts with girls, Gunnarsson (1978) and Cooper (1979) reporting more contacts with boys, and for other classrooms in their studies, Appleford et al. (1976), Cooper (1979) and Fagot (1973) reporting no difference. Again a pattern of different

kinds of contacts with boys and girls was established for different types of teacher behavior.

The following patterns of behavior have been noted for teacher talk to females: more questions asked of girls, more information given to girls (Fagot, 1977b), more verbal acknowledgements to females (Cherry, 1975), more requesting and commanding to girls (Gunnarsson, 1978), more positive reinforcement to females (Gunnarsson, 1978), more favorable comments and more initiations from teachers toward girls (Fagot, 1973). Behavior patterns of teachers toward males were of the following types: more teaching and small talk to males (Gunnarsson, 1978), more extended, detailed, and brief directions, more praise, attention and hugging to males (Serbin et al. 1973), more verbal initiations and interactions with males, and more attention marked utterances with males (Cherry, 1975). Cooper (1979) noted an interaction between sex and age, with adults more likely to talk to older children than to younger children and to older girls than to older boys. No differences were found for teacher fluency or rate of interaction initiated (Cherry, 1975), Fagot (1977c) and Oxford et al. (1979) found no differences in interactions. Thus, whereas males tended to receive instructional-type contacts, and females tended to receive somewhat affective/querying contacts, individual studies in the sample contradict this trend.

For teacher discipline and control contacts made by teachers, it seemed as though teachers were more inclined to have more of these types of contacts with males (Appleford et al. 1976; Serbin et al. 1973; Murphy et al. 1976; Berk, 1973). Possible factors influencing this trend could be the pattern for males in some classrooms to exhibit more aggressive behavior, as was the case in Serbin et al. (1973), however

no strong justification for this suggestion was in evidence in the literature. For example, just the opposite was the case for the study conducted by Huffine, Silvern and Brooks (1979) in which females were responded to more often for aggression while males more often for disruptive talking. In terms of teacher initiation of contacts, conflicting reports were also in evidence with Fagot (1973) reporting more teacher initiations towards girls and Fagot (1977c) reporting no differences, however the differences found by Fagot (1973) tended to be a school effect rather than an overall effect.

The response types made by teachers to children of different sexes varied from general praise and positive reinforcement or criticism, to reinforcement of sex stereotyped behavior, to patterns of touching behavior, to that of overall responsiveness. Each of these response types tends to overlap with others to a certain degree and where possible, pooling of dependent variables will be attempted.

Reinforcement patterns of sex stereotypic behaviors in children are fairly explicit. Males tended to be reinforced for masculine behavior (Fagot, 1977a, 1977b, 1978, 1979) and females for feminine behavior (Etaugh et al 1975; Fagot, 1977b, 1978). Males were also reinforced for opposite sex behavior (Etaugh et al. 1975; Fagot, 1975, 1977a, 1977b, 1978). However, as was the case for peer reinforcement of sex stereotypic behavior patterns, none of the studies gives evidence of females being reinforced for opposite sex behavior. In fact, both Fagot (1977a) and Fagot (1979) reported that females were criticized for opposite sex behaviors while there is only one instance of this reported for males (Fagot, 1977a). This pattern tends to suggest that feminine behaviors are more compatible with the process of schooling.

Touching behaviors of teachers, while providing no distinct trends, also is a specific category of teacher behavior. Tyler et al. (1980) indicated that more positive touching behaviors were evident in teachers interactions with females, whereas, Serbin et al. (1973) noted that this was more likely to occur for males, and Fagot (1973) also found differences in the touching behaviors of teachers towards children of either sex. Perdue and Connor (1978), in a study dealing specifically with the touching behavior patterns of teachers, noted that differences in this behavior were also influenced by the sex of the teacher. The specific details of Perdue et al.'s (1978) study will be considered in more detail in the section of Chapter IV dealing with teacher presage characteristics.

Overall, there were either no differences between males and females in the amount of positive comments or positive reinforcement received (Fagot, 1977c, 1978) or female children tended to be the recipients of more favorable comments (Fagot, 1973; Gunnarsson, 1978). A marginal difference of boys receiving more negative comments was reported by Fagot (1978). Criticism of children, on the whole, tended to be low and no differences in terms of sex were noted regarding recipients of critical responses (Fagot, 1973, 1975, 1977c).

While Fagot (1975) reported that males and females received equal amounts of teacher response, the kinds of responses children received varied according to sex. Fagot (1973) indicated that teachers responded more to girls' questions than to boys' and in 1977(b) also noted that teachers asked more questions of and gave more information to girls. Gunnarsson (1978) noted a similar trend with teachers more likely to use requesting and commanding behaviors with girls. Girls were also reported as receiving more positive feedback for passive-withdrawal

behavior (Fagot, 1978). Experienced teachers were also reported as being more likely to respond to females than males (Fagot, 1977b) and, in homes, females were more likely to receive justification responses from caregivers than males. In considering responses to males, whereas Fagot (1977b) indicated that teachers were more likely to join in the play of male children, in an earlier study (1977c) found no differences between the sexes in this regard. Gunnarsson (1978) reported that teachers used more teaching and small talk with males as opposed to females. Thus, on the one hand, it would appear that female children are getting a large share of teacher responses with regard to feedback involving questioning behavior and in terms of favorable comments in general, it is also apparent that males appear to be involved more often in direct teaching experiences. In short, it seems likely that teachers in preschool classrooms interact differently with children of different sexes.

Adult/child interaction. In discussing both the teacher behaviors and child behaviors, many of the variables that could have been included in the realm of adult/child interaction have been covered, however, a few specific to this area remain and will be dealt with in this section.

In terms of teacher contacts, Feldbaum et al. (1980) reported no differences between males and females, and, as previously mentioned, no difference between the sexes was found for the amount of teacher attention received (Fagot, 1975, 1977b, 1977c, 1978).

Serbin et al. (1973) noted that while the rate of proximity to the teacher was higher for females, there was no notable difference in teacher responses to proximity, however, teacher responses were higher to males who were not in close proximity to the teacher than to females who were not proximal. This proximity relationship for females could,

perhaps, also be found to surface in adult dependent relationships in which both Seegmiller (1977) and Travers et al. (1976) reported a tendency for females to exhibit more dependent behaviors. In reflecting upon the affective type responses frequently given to females by teachers and the likelihood of receiving a teacher response when in close proximity to the teacher, it would appear as though teacher behaviors might be reinforcing dependent behaviors in young female children.

Summary. The studies which included sex of the child as an independent variable, as a collection, do not provide any overwhelming patterns from which generalizations can be formulated. However, the following trends were noticed: (a) For fantasy play, parallel play, and solitary play, no strong differences between sexes were noted. (b) Male children tend to exhibit traditional sex stereotypic area preferences within the classroom, as do female children. (c) Aggressive behavior is more characteristic of males or no differences appear between children of different sexes for this variable. (d) Children tend to interact with the same sex classmates but findings regarding social interactive behaviors do not appear to offer definite trends except for the likelihood of peers to reinforce children for sex stereotypic behavior patterns. (e) Language use, while on a surface level, seems to indicate no difference between the sexes, at a deeper level of analysis, differences begin to appear. (f) Few definitive trends can be found for affective behaviors for either group. (g) While females tend to be higher on task persistence, males are reinforced for high task interest and for engaging in complex tasks. (h) Few differences on performance measures were noted. (i) Teachers use more discipline and control contacts with males. (j) All children were

reinforced by teachers for feminine behaviors while only males were reinforced by teachers for masculine behaviors. (k) Teachers interact differentially with children of different sexes. (l) A propensity towards adult dependent behaviors existed in female children which may have been reinforced by teacher responses.

Age of the Child

The independent variable, age of the child, is somewhat similar to the variable sex of the child in terms of the relative ease with which it can be defined and operationalized. Thus, several researchers have included age of the child as one of the independent variables to be studied. It is notable, however, that the majority of researchers investigating this variable focused primarily on child behaviors to the near exclusion of teacher behaviors.

Play. Field (1980) reported no reliable age effects for parallel play, solitary play, associative play or cooperative play, whereas Johnson et al. (1980), in a correlational study, found that both parallel and solitary play were negatively correlated with the age of the child. Unlike Field (1980), Tizard et al. (1976) reported a higher frequency of solitary play in younger children. Contradictions in the literature are also noted with regard to children's preferences for indoor or outdoor play, with Harper et al. (1975) reporting no age differences and Tizard et al. (1976) observing that younger children spent a greater proportion of time inside. A possible explanation for this latter discrepancy could arise out of the fact that Harper et al. (1975) were reporting the behavior of the same group of children one year later, while Tizard et al. (1976) were reporting the results of a cross-sectional type study. It is plausible to entertain the notion that particular play preference patterns may have been established by

the children in the Harper et al. (1975) study which carried over into the following year, whereas in the Tizard et al. (1976) study this would not have been the case.

Operation in the physical setting. Although Karlson et al. (1973) reported that no activities in the classroom under observation were totally age dependent, Berk (1973) did observe differences in the activity preferences of older and younger children. For the older children in the Berk (1973) study, more time was spent in activities such as block building, dramatic play, arts and crafts, eating, washing, drawing, making, performing, acting out, large muscle activities, small and total class groups, and activities requiring reciprocal coordination of activities. Younger children, however, spent more time in single child activities, teacher initiated activities, manipulative activities and in transition. In terms of the activity level of the children in the settings, Toner et al. (1977) reported no age differences and the mode of privacy seeking employed also did not reflect age differences among children (Jacobs, 1977).

Affective behaviors. Castle et al. (1979) reported that role taking skills were higher for older children. In investigating delay of gratification behavior through means of a correlational analysis, Toner et al. (1977) reported that only male performance on one of the tasks presented supported the hypothesis that resistance to temptation increased with age.

Academic behaviors. The behavior of task persistence was noted by Krantz et al. (1979) to increase for young females in contrast to other groups under various combinations of teacher proximity, reinforcement and prompting. In terms of performance on achievement-type measures, young children in their first year of attendance at preschool made

significant gains on the Stanford-Binet (Karlson et al. 1973) and Larsen (1975) reported that older children outperformed younger children on conservation tasks and motor tasks.

Child social interactions. With regard to the initiation of interaction, while Field (1980) reported no reliable age effects, Berk (1973) observed that older children tended to use more coercive methods for initiating contacts than younger children. Several findings which cluster together, but yet which are somewhat unrelated, were also reported for child social interactions. Field (1980) again found no reliable age effects for social interactions and Murphy et al. (1976) corroborated this inasmuch as no differences were reported between age groups. However, Finkelstein, Dent, Gallacher, and Ramey (1978), Reuter et al. (1973) and Berk (1973) all reported a higher incidence of child social interactions for older children and Kerschner (1977) observed a higher incidence of conflicting social interactions in two and three year olds. When involved in social interactions, the tendency appeared for older children to use more verbal responses whereas younger children used more non-verbal responses (Berk, 1973). A similar pattern exhibited itself in vocalization to peers (Finkelstein et al. 1978, Tizard et al. (1976), except in the study by Field (1980) in which no reliable age effects appeared. Eisenberg-berg et al. (1979a) indicated that an age by sex interaction was in effect resulting in the amount of interaction with the same or opposite sex differing for older but not younger children.

As for general prosocial behavior, Eisenberg-berg and Neal (1977) reported no differences between age groups but in later studies, Eisenberg-berg et al. (1979c) indicated that sharing increased with age, but helping/comforting behavior did not; that older girls used defending

behaviors more than the same sex younger children (Eisenberg-berg, Haake, Hand, and Sadalla, 1979b); and that older children shared more when instructed that an object belonged to the class, while younger children shared more under the condition of no instructions (Eisenberg-berg et al. 1979b). Finally, Sherman (1975) observed that no age differences were apparent with respect to group glee.

Language. Cooper (1979) investigated the verbal behavior of children of different ages in the presence and absence of an adult and noted the following results: (a) older children utilized their verbal skills when making threats; (b) older children gave more information to younger children in an adult's absence, but when an adult was present, only younger girls continued this procedure; (c) older children made more suggestions in an adult's presence; (d) older boys tended to talk more while the teacher was absent; (e) older girls were more verbally inquisitive; (f) older girls gave more confirming responses, and (g) a decrease in conversation was noted for all children except young boys when a teacher was present.

Adult/child interaction. While younger children exhibited more attachment behaviors towards mothers in the Strange Situation Test, no differences between age groups appeared in the natural setting (Ragozin, 1975, 1980). Reports for the overall amount of adult/child interaction were conflicting. Tyler et al. (1980), Reuter et al. (1973) and Finkelstein et al. (1978) all reported that younger children were involved in more social teacher/child interaction contacts. In contrast, Field (1980) reported no reliable age effects for interaction between adult and child and Berk (1973) indicated that older children were engaged in more adult/child interactions. Compliant behavior was observed by Kerschner (1977) to be more frequent in younger children who were in a

multigenerational daycare (care involving the use of older adults as assistants), while in traditional daycare both younger and older children exhibited compliant behavior. The higher degree of compliant behavior of younger children in multigenerational daycare could be attributable to the fact that older adults tended to give more care to younger children, thus, perhaps, indicating a reciprocal relationship between the two.

In verbal interaction with the teacher, Cooper (1979) reported that adults talked more to older children and Berk (1973) and Tizard et al. (1976) indicated that older children in turn talked more to adults than did younger children. In fact, Kerschner (1977) noted that older children talked more to adults than to peers. In their communications with teachers, older children were observed by Berk (1973) as being more likely to use coercive methods. Field (1980) reported no reliable age effects for verbal interaction with the teacher and Tyler et al. (1980), in dealing with a much younger age group--infants and toddlers--found that adults tended to chat spontaneously to babies rather than toddlers.

Summary. As was the case for the variable, sex of the child, no strong trends appear for the variable, age of the child, however, for the latter variable, this "no strong trends" pattern is accentuated. Contradictions within the literature abound and it is evident that this area is in need of further research geared towards common research hypotheses.

Attractiveness of the Child

Only one study (Appleford et al. 1976) dealt with this variable and the following results emerged from that investigation.

Child behaviors. Low attractive males, when compared to all other children, received fewer social contacts while low attractive females received more.

Teacher behaviors. Teachers initiated more social contacts with low attractive children.

Adult/child interaction. Both children and teachers tended to initiate more disciplinary contacts with low attractive children, in particular low attractive/low socioeconomic status children. If, however, a school happened to be of all one socioeconomic status type, in this case, low, there were no differences of any sort noted for teacher/child interactions.

Social Competency/Developmental Level

Two studies included social competency and developmental level as independent variables and related them to active social interactions within the classroom with somewhat conflicting results.

Child behaviors. While Brown et al. (1979) noted that little or none of the variance in active social interactions was accounted for by child characteristics, two of which were social competency and developmental level, Connolly and Doyle (1979) reported that 41 percent of the variance could be accounted for by social status and developmental level.

Type of Handicap; Preschool Experience; Number of Silblings; Birth Order; Number of Days in the Classroom

These child characteristics were examined by Brown et al. (1979) and, as alluded to earlier, were reported to have accounted for little or none of the variance in active social interactions.

Stable/Referred Child

A study by Carter (1977) was the sole study dealing with the independent variable of a child being either stable or referred (having emotional or learning problems). The dependent variable examined was that of choice of classmates for social interaction.

Child behaviors. While Carter's (1977) study concluded that overall there was evidence to support the notion that social interaction, in the form of choice of a classmate for an activity, occurred between stable and referred children, examination of the frequencies of such choices reported by Carter (1977) reveal that both stable and referred children were more inclined to choose stable children rather than referred children. Although Carter (1977) using a chi square analysis technique reported that there appeared to be social interaction between the groups, it would appear that it is also slightly more than noteworthy that stable children chose other stable children twenty-four times more than referred children.

At Risk/Normal Children

Closely aligned to the independent variable of stable/referred child is that of at risk/normal child. In this instance again, few studies were undertaken using this independent variable. Cavallaro and Porter (1980) and Forness and Guthrie (1977) both examined this issue and once again the predominant focus was on the child behavior aspect.

Child behaviors. If the analysis of Carter's (1977) study is correct, a partially similar pattern surfaced for Cavallaro et al.'s (1980) study inasmuch as normal children interacted significantly more with other normal children in parallel play. However, unlike Carter (1977), the at risk children interacted more with other at risk

children than with normal children. Similar patterns for the children in the Cavallaro et al. (1980) study were also noted for gaze behavior. While normal children gave more proximal and total gazes to other normal children, at risk children did so towards other at risk children. A slightly different pattern for gazes received was reported with normal children receiving equal amounts of gaze behavior from normals and at risk children, but at risk children receiving more gazes from other at risk children.

Teacher behaviors. Forness et al. (1977), in a correlational analysis, reported a high correlation between on task behavior and whether the child was normal or at risk. Normal children, who by definition were high in on task behavior, received higher teacher ratings than did at risk children who, by definition, were lower in on task behavior.

Abused/Nonabused Children

This category of independent variables holds some similarities to both the at risk/normal and stable/referred categories of independent variables. Again, only one study (George and Main, 1979) has dealt with this independent variable and therefore no attempt at analysis will be made, but the results will be reported.

Child behaviors. George et al. (1979) found that while there were no differences between abused and nonabused children in approaches to peers, abused children were four times as likely to avoid peers, twice as likely to be aggressive toward peers and 100% more likely to exhibit an approach/avoidance behavior to friendly overtures made by peers.

Adult/child interaction. While George et al. (1979) reported no differences in the number of times a caregiver approached peers, abused children approached the caregiver only half as often as nonabused

children, were more likely to use an indirect approach in response to a friendly caregiver approach, were three times as likely to avoid the caregiver as nonabused children and were four times as likely to exhibit aggression towards the caregiver.

Isolate/Nonisolate Child

Another category dealing with atypical children which was investigated by researchers (Scarlett, 1980; Wishon et al. 1979) was that of isolate/nonisolate child. Again the majority of results fall into the child behavior category.

Child behaviors. Isolates were more frequently observed in unoccupied activity, onlooker activity, and solitary spacing while nonisolates spent more time in peer oriented behavior, associative play, integrative play and imaginative-dramatic play (Scarlett, 1980). Scarlett (1980) also reported that isolates and nonisolates spent the same amount of time involved in independent or parallel play. While Wishon et al. (1979) indicated that social interactive behaviors of isolates could be increased through the use of peer reinforcement, Scarlett (1980) reported that the change from a large group setting to a small one was marked by an increase in the social interactive behavior of isolate children.

Adult/child interaction. Both isolates and nonisolates were reported as spending more time in proximity to peers than to adults (Scarlett, 1980) although the absolute differences within each type of proximal behavior were not reported.

High/Low Apathy/Withdrawal or Anger/Defiance in Children

Kohn et al. (1974) were the only researchers investigating this independent variable and, much like the other variables dealing with atypical children, this variable was examined in relationship to child behaviors.

Child behaviors. As the terms themselves might imply, children who were rated high by teachers on apathy/withdrawal exhibited higher solitary behavior, while children rated high by teachers on anger/defiance exhibited higher negative/hostile behavior (Kohn et al. 1974). A tendency for children high on anger/defiance to defend themselves was noted in contrast to children high on apathy/withdrawal who exhibited fewer defensive behaviors when they were target of hostile behaviors (Kohn et al. 1974). Again, almost by virtue of definition, children who were high on apathy/withdrawal were low on peer interactions and initiations, while children who were high anger/defiant had a greater frequency of peer interactions (Kohn et al. 1974).

Handicapped/Nonhandicapped Children

Several researchers investigated the behaviors of handicapped (HC) and nonhandicapped (NHC) children in the classroom setting. While some researchers studied these two types of children in a general manner, other researchers further delineated the term handicapped (HC) into three subgroups--severely handicapped (S), moderately handicapped (Mo), and mildly handicapped (Mi). As was the case in previous studies of atypical children which have been reported, the primary concentration of this group of studies is in the area of the child's behaviors. Because of the numbers of dependent variables within this area, these behaviors will be subgrouped in a manner similar to that used for the independent variables of sex and age of the child.

Play. While Guralnick (1978) reported that HC children engaged in more unoccupied time and onlooker behavior than NHC children, Plummer (1977) noted that the amount of time spent in such behavior decreased over time when HC children were integrated with NHC children. Field (1979) also indicated that a greater incidence of non-directed looking

was prevalent in S children and Mo children in contrast to Mi and NHC children. Solitary play behavior was also noted as being more frequently observed in less advanced children (S, Mo, Mi) than in NHC children (Guralnick, 1978). In terms of parallel play behavior, Guralnick (1978) noted that this was the predominant play mode for NHC, Mi, Mo, and S children and, according to Plummer (1977), although HC children did not use this mode as frequently as NHC children when initially integrated into a classroom with NHC children, use of this mode of play increased over time for HC children. Guralnick (1978) further reported that NH and Mi children used less parallel play behavior with S children and more with Mo children. In a somewhat similar vein, Montemurro (1980) found that NHC and HC children mutually used parallel play and appropriate integrative play in interacting with one another but differed in the amount of directing and sharing of information in those interactions. Plummer (1977) reported that for associative play, as for parallel play, this form of play behavior increased in HC children over time when integrated with NHC children while Guralnick (1978) noted that all groups of less advanced children--S, Mo, and Mi--engaged in less cooperative and constructive play behavior than NHC classmates. Furthermore, Guralnick indicated that S and Mo children played more constructively in a mixed condition while for NHC and Mi children an unmixed condition was more conducive to constructive play. Thus, in general, a developmental sequence of play behavior for HC children is apparent and this sequence appears to be enhanced for HC children when integrated with NHC groups.

Child social interactions. Non-directed behaviors such as smiling, vocalizing, movement and touching oneself were reported by Field (1979)

to be more characteristic of the S and Mo groups than the Mi and NHC groups. Somewhat similarly, Field (1979) indicated that S children exhibited less looking at peers than Mi and Mo groups who exhibited less than NHC children. An almost identical pattern was also established by Field (1979) for children's proximity to peers, with S and Mo children exhibiting less proximal behavior than Mi children who in turn exhibited less than NHC children. Field (1979) also noted that the social behavior of sharing a toy could more commonly be found in NHC children than HC children.

Shores, Hester, and Strain (1976), in a study involving only HC children, found that child/child interaction could be prompted more within that group through the use of teacher structured free play which produced more of this type of interaction than no teacher involvement. Active teacher involvement, according to Shores et al. (1976) was the least productive setting for promoting social interaction among HC children. Plummer (1977) also observed that levels of social participation for HC children increased over time when HC children were placed in a preschool program with NHC children.

In terms of interactions among NHC children and different types of HC children, Guralnick (1978) noted several patterns. In accordance with the criterion of availability, S and Mo children interacted with all types of children as frequently as would be expected while NHC and Mi children tended to interact more with each other than with the Mo and S groups. Thus, as in the case of play behaviors, integration of HC and NHC children in preschool would appear to be beneficial for HC children, but does not appear to affect, to a great extent, the interactions of more advanced children.

Teacher behaviors. Plummer (1977) reported that teacher attitudes toward integration of HC children tended to be positive and Guralnick's (1978) study would lend some support for a partial carry over effect of positive teacher attitudes into the classroom inasmuch as teachers tended to give more prompts and positive reinforcement to the less advanced children, however the absolute differences tended to be small. As only two studies give information on the nature of teacher behaviors, the inference drawn from the two studies should be considered of a speculative nature.

Adult/child interaction. Adult dependent behaviors tended to be the predominant behavior type of both NHC and HC children (Edwards et al. 1979). The tendency for HC to be non-responsive to adult direction decreased over time in Plummer's (1977) observations. Also notable was the fact that NHC children were more vocal to the teacher than HC children (Field, 1979), however, this may be by virtue of ability rather than predisposition.

Affective behaviors. Pastor and Swap (1978) reported that HC (emotionally disturbed) children exhibited more disruptive behavior in the regular class than in a special class.

Language. NHC exhibited more vocal behavior toward peers than HC (Field, 1979), however HC children tended to move away from behaviors such as shaking their heads or nodding to the use of single words or phrases over time when integrated with NHC children (Plummer, 1977).

Summary. While the total number of studies dealing with HC and NHC children is only six, trends do begin to emerge. Play patterns in HC children appear to follow a developmental pattern and although HC children tend not to be as socially competent as their peers, integration with NHC children tends to enhance development of social skills

in HC children while not deterring social growth in NHC children. The pattern of within and across group lines established in the study of Carter (1977) involving stable/referred children and Cavallaro involving at risk/normal children seems to reoccur for the NC/NHC groups.

Socioeconomic Status of the Child

Surprisingly, this variable was not utilized a great deal by the researchers included in the sample of studies under review. While the socioeconomic status (SES) of the child may often have been noted, it was not frequently considered in subsequent analysis. Of the 159 studies under review, only six considered this variable in their analyses, however, within these six studies the variable of SES was related to over twenty-five dependent variables.

Play. No differences among social classes were found by Tizard et al. (1976) for solitary play, level of social play, complexity/length of games, or frequency of dramatic impersonations. Also, while Tizard et al. (1976) noted that children from the working class were observed as having a lower level of symbolic play, no differences among social class groups were noted for the themes used when children did engage in symbolic play. Beller (1973) reported that dramatic play occurred with a higher frequency in heterogeneous SES groups.

Operation in the physical setting. In terms of physical use of play materials, no difference between SES groups was noted for appropriate use of play materials or original combinations of play materials (Tizard et al. 1976), while lower class children exhibited a greater tendency to make partial use of play materials, to prefer playing with transportation toys, and to engage in outdoor, rather than indoor, play (Tizard et al. 1976).

Differences were noted among children of different classes for behavior in the physical setting. Book related activities, animal and plant care, exploring, manipulating, watching, waiting, transition, listening and wandering were observed by Berk (1973) as being more frequently engaged in by middle class children while children of low SES spent more time in eating and readying activities. Lower class children were observed as spending less time in child initiated activities, more time in total class groupings and more time in noncoordinated peer activities, in contrast to middle class children who were reported by Berk (1973) as tending to spend more time in child initiated activities, in single child, cluster or dyad groupings, and in reciprocally/simultaneously coordinated peer activities. Tizard et al. (1976) also noted that social class differences were less noticeable in middle class schools.

Child social interactions. Appleford et al. (1976) noted that female children of middle SES received more social contacts than either low SES females or middle or low SES males. Partially supporting this finding, Berk (1973) reported that middle SES children were more likely to seek help from the other children than their low SES counterparts. Interestingly enough, Berk (1973) also reported a similar finding for females, however no interaction effect was reported.

Language. Lower class children were reported by Tizard et al. (1976) as having lower language comprehension abilities than their middle class peers.

Academic behaviors. Social class effects were not in evidence for either the WPPSI or the Stanford-Binet, however Head Start (lower class) children did make significant gains on the Merrill-Palmer after having been enrolled in a preschool program (Karlson et al. 1973).

Teacher behaviors. Appleford et al. (1976) reported that teacher social and instructional contacts were given at a higher frequency to middle class children, whereas Kennedy noted no differences in the frequency of these types of contacts and Berk (1973) reported that more single, as opposed to multi-unit contacts were given to children of the lower classes. Thus, no clear trend is in evidence. Appleford et al. (1976) also indicated that lower class children received more discipline and control contacts, however, no other researcher investigated this area. Despite the variance in reported teacher contacts, Kennedy (1976) indicated, in a correlational analysis, that teacher ratings were not related to SES.

In terms of teacher directedness, Berk (1973) found that lower class children spent more time in teacher directed activities while middle class children were more inclined to be involved in activities that did not include teacher involvement. Yet, in spite of this aspect of teacher involvement and SES, teachers were observed as giving a greater proportion of verbal responses to middle class children and nonverbal to lower class children (Berk, 1973).

Adult/child interaction. No overall differences were found between the SES groups on the amount of child talk to teachers or peers (Tizard et al. 1976) or on the coerciveness or verbalness of methods used by children in teacher/child contacts (Berk, 1973).

Summary. While it appears noteworthy that different factors may be operating for children of varying SES backgrounds with regard to specific aspects of classroom interactions, due to the limited number of studies in the area and their specificity of focus, no trends are identifiable.

New/Tenured Student

Only one researcher (Feldbaum et al. 1980) investigated this aspect of the new student entering a classroom as contrasted to his or her host or tenured classmates. Earlier, in discussing the impact of sex of the child, several references to the interaction between sex of the child and the new/tenured status were reported and thus will not be included in this section. The results of this study are primarily concerned with child behaviors and will be reported under that category.

Child behaviors. Behaviors most likely to occur in new children were: off task behaviors, nonsynchronous on-task behaviors and spatial isolation, while cooperative play behaviors, synchronized parallel play behaviors, verbal interaction with other children and initiation of teacher interactions were more typical of host or tenured children (Feldbaum et al. 1980).

High/Low Social Interactors

Two research works (Tremblay, Strain, Hendrickson, and Shores, 1980; Castle et al. 1979) were produced considering the variable of children who were high or low social interactors. Both investigated the variable in relation to the child behaviors which were affected.

Child behaviors. Children having a high rate of social interaction engaged in more mutual behavior and fantasy behavior (Tremblay et al. 1980) and scored higher on role taking tasks (Castle et al. 1979) while low social interactors engaged in more solitary and parallel play behaviors (Tremblay et al. 1980). No differences were noted by Tremblay et al. (1980) regarding the play behavior of children. Castle et al. (1979) also found that the amount of peer interaction in which a child

was involved does not appear to affect his or her communicative egocentrism.

High/Low Intrinsically Interested Children

Loveland and Olley (1977) pursued the question of the differences which might result in the drawing behavior of children who were either high or low on observed natural intrinsic interest in drawing behavior and the effects that rewards might have on subsequent behavior.

Child behaviors. Loveland et al. (1977) found that for children who were high on intrinsic interest, an expected reward caused them to lose interest while, with no reward expected, the high intrinsic interest was maintained. For children low on intrinsic interest, an expected reward served to increase interest when given for the first time, however this interest was not maintained in a second reward-condition trial.

Race of the Child

Despite the relative ease in which this variable could have been defined and operationalized, few studies included it in analysis of data. Authors generally referred to the racial characteristics of the sample when describing the sample but did not extend their examination of this characteristic any further. Only two authors included race of the child in subsequent data analysis.

Child behaviors. Forness and Esveltdt (1975) found that task persistence was higher in white children than non-whites. Mathis et al. (1976), in a study involving all black children, in contrast to other studies in the sample which tended to primarily include white children, found that black children were high on latency time and on leaving the field. Mathis et al. (1976) also noted through a correlational analysis that IQ was positively related to self-concept and aggression for

black children.

Ethnic Heritage of the Child

This variable received even less study than race of the child and was included in a correlational study undertaken by Huston-Stein et al. (1977) as one on the variables to be considered.

Child behaviors. Huston-Stein et al. (1977) found that classroom size-ethnicity was highly related ($r = .83$) to teacher warmth and attributed the higher task persistence in low structured classes to ethnic differences.

Summary

As a collection, then, the group of studies dealing with presage characteristics of the child have few strong noteworthy trends other than those noted for sex of the child, and for handicapped/nonhandicapped children, and even in these cases trends did not appear to be all that strong. In short, the studies tended to be too specific in individual focus to be able to be utilized in deriving generalizations. The studies although broad in scope, in many cases, were "one-shot" type studies which although contributing an individual fragment of information about a particular setting did not provide the quantity of information needed for generalization purposes. Therefore, the fragments remain just that, fragments which unfortunately do not fit together to provide a picture of the contribution child presage characteristics make to the interactive processes in the classroom.

Child Behaviors

While child presage characteristics are concerned with the characteristics that the child has prior to entering the classroom setting which may impinge upon his or her behavior in that setting, child behaviors are those behavior patterns which are emitted while the child is in the

setting. Typically, these child behaviors have been dependent variables in the studies reviewed, however in some cases they may be considered as operating as independent variables in some of the studies under review. It is those studies that will be considered in this section. Also to be considered in this section are child behaviors which have been examined in descriptive studies or correlational research works. Eight variables regarding child behaviors will be reviewed in this section.

Peer Reinforcement/Peer Reporting

Peer reinforcement was manipulated in the natural setting in two research studies (Grieger, Kauffman, and Grieger, 1976; Wishon et al. 1979). Both groups of researchers investigated the consequences that increased peer reinforcement had upon behaviors of other children within the group.

Child behaviors. Grieger et al. (1976) combined peer reporting and peer reinforcement in one part of their study to determine the effects that it would have upon the aggressive behaviors of children in the classroom. Children were to report as part of their daily routine about one child who had been friendly to them in the course of the day. The praise that naturally resulted from peers, when combined with the peer reporting served to decrease the number of aggressive incidents within the classroom. Wishon et al. (1979) rewarded children for praising the play behavior of a socially isolate child. The praise that children gave to their classmate resulted in an increase in social interactions for that child. Grieger et al. (1976) also reported that cooperative play also increased through use of peer reinforcement when combined with peer reporting. Thus, the merits of

encouraging children to praise each other with regard to socially acceptable behavior seem apparent.

Child Awareness of Classroom Societal Structure

This variable, although not strictly an independent variable, dealt with whether the child showed awareness of the societal structure of his or her classroom through either being able to communicate to others how the classroom operated in terms of appropriate or inappropriate interactional aspects or in terms of the child's actual operation within the setting. King (1979) investigated this variable through the use of interviews with children based upon observations of the classroom. Wallatt and Green (1979) used a stimulated recall technique with children and Black (1980) used observational data to make inferences about the child's awareness of the classroom's societal structure.

Child behaviors. King (1979) examined the child's concept of what constituted work and what constituted play and contrasted this to what the teacher considered work and play. Based upon the interview conducted with children, King (1979) concluded that children considered play as voluntary and under their control. While teachers held somewhat similar views, they also included fun and creative activities under the realm of play. Black (1980) noted that children showed interactional competence in settings in which they exercised control. Wallatt et al. (1979) found that, in settings in which the child may or may not have exercised control, children showed an awareness of what was occurring and what was expected. Furthermore, Wallatt et al. (1979) noted that children could communicate to others the cues that the teacher gave which enabled social contexts to be maintained. Thus, perhaps by nature of having to survive in the system, children exhibit a conscious awareness of the classroom as a social structure.

Disruptive/Nondisruptive Group Glee

Group glee could perhaps best be described as contagious hilarity and buffoonery. Sherman (1975) studied this variable and, among other things, noted the teacher responses to disruptive and nondisruptive group glee.

Teacher behaviors. Disruptive group glee, glee lasting longer than ten seconds, and precipitated by satiation on task, was most likely to receive a suppressive response from teachers. Suppressive responses on the part of teachers were least likely when the glee was nondisruptive, lasted less than ten seconds and involved a combination of laughing/screaming/and intense physical involvement.

Child Sociometric Status

This variable was examined in terms of children who had received high or low ratings on a sociogram. Marcus (1977) and Gottman (1977) both studied this variable in relation to child social interaction behaviors.

Child behaviors. In the Gottman study (1977), there were several rankings of children with regard to sociometric status and behavior in the classroom. Gottman (1977) used the following categories to describe children: sociometric stars, low peer interactors, sociometric rejects, disruptive to the teacher, and tuned out children. In terms of hovering behavior, Gottman (1977) observed that low peer interactors and sociometric rejects exhibited less of this behavior than sociometrically neglected children (tuned out children and disruptive to teacher children). Tuned out children were also observed by Gottman (1977) as being less accepted by peers than the child who was disruptive to the teacher. Marcus (1977) found that an interesting relationship existed between low and high sociometric status children in terms

of helping behavior. Low children were observed as giving more help than they received and high status children received more help than they gave.

Although not elucidating in any great manner the relationships that may exist in terms of sociometric status, the results of these two studies do provide some highly interesting findings which are worthy of further research pursuit.

Role Taking

Because the studies investigating role taking were of a correlational nature, no cause-effect relationships can be assumed. Both Strayer and Christophe (1978) and Jakob et al. (1976) examined role taking in relation to child behaviors.

Child behaviors. Jakob et al. (1976) found that overall, role taking and social competence were highly related. Support for this finding is provided by a study by Castle et al. (1979) in which role taking was the dependent variable. Castle et al. (1979) found that high social interactors scored higher on role taking tasks than did low social interactors. Strayer et al. (1978) noted that while empathy received upon request correlated highly with perceptual role taking and donations, empathy spontaneously given correlated highly with affective role taking.

Thus, some indications seem to be provided from the above studies which lend credence to the notion that children who have high social interaction rates are better able to take the perspective of another.

Child's Mode of Attachment to the Teacher

Houston (1978), in a descriptive study, examined the predominant modes of attachment to the teacher in an attempt to make statements

about attachment bonding between teacher and child.

Adult/child interaction. Houston (1978) found that the vocal mode was most frequently used, followed by the gestural mode. The mode least used in adult/child interaction was the physical mode.

Child Social Initiations

Child social initiations and their consequences were studied by five research groups (Strayer et al. 1977; Strayer and Strayer, 1975; Corsaro, 1978; Pellegrini, 1980; Strain et al. 1979). The primary focus was upon child behaviors, however, Pellegrini (1980) did examine teacher response.

Child behaviors. Strain et al. (1979) found that when a positive child social initiation contact was made, it was generally followed by a positive response on the part of the recipient of that initiation, whereas when a negative initiation was made it tended to be followed by a negative response on the part of the recipient. Strayer et al. (1977) noted that no response was given to over half of the child initiated actions, and that low status children were the target of half of the agonistic interaction contacts. In examining the agonistic contacts further, Strayer et al. (1975) found that in very few cases was the response of a child to such a contact one of seeking help from the teacher, rather, children receiving such contacts either gave no response, submitted or suffered the loss of an object which they had in their possession. Corsaro (1978) observed that when a child wished to gain access to a group the following combination of strategies were employed about 80 percent of the time: nonverbal entry, circling the group, claiming an object in possession of the group, making a disruptive entry, or producing a variation of the ongoing behavior.

Teacher behaviors. Pellegrini (1980) found that children generally repeated the topic introduction to a sociodramatic play sequence in order to get the attention of an adult.

Few trends can be generated from this group of studies due to their diverse nature, however it would appear that, as with many of the other variables under review, there are aspects of child social initiations which are in need of further research.

Summary

While the studies reviewed under the Child Behaviors category of independent variables have neither a large group of research studies to draw upon nor a large number of dependent variables to examine, the disparity that existed in the Child Presage Characteristics group of studies is not as apparent. The studies examining Child Behaviors tended, as a whole, to be complementary rather than conflicting in their reports of research findings and because of their small numbers, rather than providing information upon which to base generalizations, these studies provide a good foundation upon which to base further research and provoke stimulating questions for further research. The following trends, although based upon only a few research studies, were noted: (a) peer reinforcement can be effectively used to enhance positive social behavior in the classroom; (b) children demonstrated an awareness of classroom societal structures; and (c) high social interactors appear to have higher role taking skills.

Summary

This chapter reviewed the studies, from the sample of studies under review, which were concerned with child presage characteristics or child behaviors. When it is considered that about 100 of the 159

studies have been included in this group, it is surprising to find the lack of consensus in research findings by which this group may be characterized. Because of this lack of consensus in a particular area, or because of a lack of research studies in a particular area, no generalizations can be drawn from this body of literature, however, trends were noted regarding several variables. It is interesting to note the high frequency of times in which an investigator listed a presage characteristic, but did not consider it in subsequent analysis, or did not report the findings regarding that variable. Furthermore, while the child presage group of studies may be characterized by overall disparity in research findings, the child behavior studies tend to complement one another. The most apparent, and in some senses devastating, implication that can be drawn from all of this is the need for research with a common focus in the preschool area with regard to the presage characteristics and behaviors of the young child.

CHAPTER IV

THE TEACHER

The teacher has been regarded by some as the key participant in the classroom setting. This chapter will review the studies from the sample dealing with teacher presage characteristics and teacher behaviors to determine what relationships these variables have, if any, to teacher behaviors and/or child behaviors in the classroom. Unlike the research work reviewed on the child in which the preponderance of variables were concerned with child presage characteristics, the studies which investigated teacher characteristics or behaviors were primarily concerned with teacher behaviors in the classroom.

Teacher Presage Characteristics

Only five teacher presage characteristics could be identified in the literature under review. These variables were considered in relation to over 25 dependent variables. The results of a cross-study analysis of the teacher presage characteristic variables will be presented in this section.

Sex of the Teacher

The presage characteristic, sex of the teacher, was examined in relation to three dependent variables, all of which were primarily concerned with teacher behaviors. Although this variable is relatively easy to operationalize and define, only five researchers (Etaugh et al. 1975; Fagot, 1977b; Perdue et al. 1978; Robinson, 1977; Serbin et al. 1973) conducted research upon this variable. This, perhaps may be accounted for by the fact that there has been a strong tradition in preschool education involving the use of female, rather than male,

teachers, thus reducing the chances of obtaining data on this teacher presage characteristic.

Teacher behaviors. In terms of reinforcement of sex-stereotypical behaviors, a fairly clear picture began to develop regarding the sex of the teacher and the behaviors he or she would reinforce. While Etaugh et al. (1975) and Robinson (1977) found that there were no differences between male and female teachers regarding the reinforcement of feminine behaviors in children, Fagot (1977b) and Robinson (1977) also noted that male and female teachers showed no differences in responding to feminine behaviors. In fact, both male and female teachers responded more frequently to feminine behaviors rather than masculine behaviors regardless of the sex of the child according to both Robinson (1977) and Fagot (1977b). Robinson (1977) also noted that both male and female teachers dispense more punishers for masculine behaviors.

Overall, however, Etaugh et al. (1975) found that male teachers did dispense more rewards to males for masculine behaviors than did female teachers. As well, Fagot (1977b) also noted that male teachers gave more favorable comments, joined in the children's play more frequently, and demonstrated more affection towards children than did female teachers.

The patterns of touching, in some senses, produced a similar pattern to that of reinforcement of sex stereotypic behaviors. Perdue et al. (1978) reported that male teachers touched male children more frequently than female teachers and were more likely to give a helpful touch to girls than to boys. Furthermore, male teachers were also more inclined to give a friendly touch to boys than to girls and were more likely to do so than female teachers. Perdue et al. (1978) found that,

for female teachers, there were no overall differences in the overall patterns of touching used by female teachers and Serbin et al. (1973) also reported that there were no overall differences in the rates of touching used for either sex child by female teachers.

Adult/child interaction. Interestingly enough, it would appear as though patterns of touching by teachers were reciprocated by children. Male children were reported by Perdue et al. (1978) as being more likely to touch male teachers more frequently than female teachers and more likely to do so than female children. Both female and male children tended to touch the male teacher in a friendly, rather than an incidental manner. Perdue et al. (1978) also noted that while female teachers had shown no difference in the patterns of touching male or female children, no differences were also evident in the rate or pattern of either sex child in touching the female teacher.

Thus, it would appear that, overall, no differences exist between either sex of teacher for reinforcing feminine behaviors for either sex of child thus strengthening the pattern presented under the variable sex of the child. Male teachers do apparently reinforce male children more often than female teachers for masculine behaviors and generally appear to be more positive toward all children than female teachers. Somewhat similar patterns surface in regard to the touching behaviors of teachers toward children, which appear to be reciprocated by the children's behavior.

Teacher Experience

In attempting to partial out what factors may influence teacher behavior in the classroom, Fagot (1975, 1977b) and Brown et al. (1979) have examined what part teacher experience may have to play in determining how a teacher will act in the classroom setting. Fagot (1975,

1977b), who has extensively studied sex differences in both teachers and children, has hypothesized that teacher experience, rather than the sex of the teacher, may have greater import with respect to teacher behavior, while Brown et al. (1979) have examined this variable with respect to differential interactive patterns of handicapped or nonhandicapped children.

Teacher behaviors. In terms of response to sex stereotypical behavior patterns of children, the recurring trend of a higher response to feminine behaviors regardless of the sex of the child emerged for experienced teachers, however, Fagot (1975, 1977b) also found that inexperienced teachers were more likely to respond to feminine behavior patterns for female children and masculine behavior patterns for male children. In addition, Fagot (1977b) reported that experienced teachers more frequently responded to female children than to males. It is likely that this latter finding is closely related to the tendency for experienced teachers to respond to feminine behaviors of the child regardless of sex of the child.

The following behaviors were found to be higher for experienced teachers: teacher direction, a higher frequency of asking questions, a tendency to give more information, a tendency of helping children to learn more (Fagot, 1977b), a higher rate of initiation of behaviors (Fagot, 1975), and a higher likelihood of giving favorable comment (Fagot, 1977b) with Fagot (1975) indicating that this favourable comment was more likely to be directed toward females. Although in both the 1975 and 1977(b) studies, Fagot reported that there was a higher likelihood of inexperienced teachers joining the play of children, Fagot (1975) also reported an interaction effect, with both experienced and inexperienced teachers tending to join the play of males more often than

females. Inexperienced teachers were also noted as having a lower overall rate of interaction with children compared to that of experienced teachers (Fagot, 1975, 1977b). A differential effect was also noted in terms of the reaction of teachers to the activities of the children, with inexperienced teachers reacting equally to all types of activities and experienced teachers reacting to art and fine motor activities more frequently (Fagot, 1977b).

Child behaviors. Brown et al. (1979) found that the combination of teacher experience, teacher attitude and teacher training accounted for 19 percent of the variance in the active social interactions of handicapped children, but reported that this effect was more highly related to the interactions of nonhandicapped children.

Although only a few studies actually examined the variable of teacher experience, when it is considered in light of other variables which have been presented (such as sex of the child and sex of the teacher), some interesting patterns begin to reoccur such as the tendency of teachers regardless of sex of the child and sex of the teacher, (but not the experience of the teacher), to reinforce feminine behaviors in children independent of sex of the child. Interesting parallels also begin to appear regarding the sex of the teacher and the experience of the teacher which are worthy of further investigation.

Teacher/Teacher Assistant

One research group compared the behaviors of teachers and teacher assistants. Townsend and Zamora (1975) examined these behaviors in the contexts of a bilingual English/Spanish program.

Teacher behaviors. Townsend et al. (1975) reported that teachers tended to use a higher percentage of indirect behavior and allowed for more student response, in contrast to teacher assistants who used more

teacher talk in dealing with children and were more prone to switching languages during the presentation of a lesson. Also teachers were observed by Townsend et al. (1975) as using a greater proportion of combined positive nonverbal responses to children whereas teacher assistants were more likely to use more negative nonverbal behaviors. No differences between teachers and teacher assistants were reported by Townsend et al. (1975) for the behaviors used in each language.

Effective/Ineffective Teachers

Scott (1977), the sole researcher investigating the variable of effective/ineffective teachers, used ratings of supervisors to categorize the teachers in the sample used as effective or ineffective and then proceeded to conduct observational work to attempt to discern if any differences existed between teachers rated as effective or ineffective.

Teacher behaviors. The following behavior patterns were noted by Scott (1977) as being more characteristic of effective teachers than ineffective teachers: more episodes concerning the whole group than individuals in a large group activity, episodes of longer duration, more self-directedness, a higher participation level, and more frequent use of two or more methods (e.g. verbal, signal, physical contact) during behavior episodes.

Teacher Training

Three research teams (Friedrich-Cofer et al. 1979; Stachel, 1980; Brown et al. 1979) investigated the effects of teacher training upon child behaviors in the classroom or upon teacher behavior.

Child behaviors. As reported earlier, Brown et al. (1979) found that the combination of teacher training, teacher experience and teacher attitudes accounted for 19 percent of the variance in the active

social interactions of handicapped children, however, this combination tended to be more highly related to the interactions of nonhandicapped children. Friedrich-Cofer et al. (1979) reported that when teacher training regarding promotion of prosocial behavior was combined with in-classroom films and play materials on prosocial behavior, the incidence of prosocial behavior was greater than with the use of films and play materials only, the use of films only, or a neutral condition which involved the use of none of the foregoing techniques.

Teacher behaviors. Stachel (1980) observed that teachers given teacher training and on-site instruction in the implementation of a science program in kindergarten demonstrated a higher rate of program implementation than teachers given no instruction.

Due to the varying nature of the studies involving teacher training and the fact that teacher training was often combined with other variables in subsequent analysis, it is difficult to draw any consensus from the literature regarding this variable.

Summary

The variables dealing with teacher presage characteristics, although few in number, do begin to generate a particular pattern of behaviors which may be associated with those characteristics, especially the variable, sex of the teacher. As previously indicated, a trend for reinforcement of feminine behaviors, regardless of the sex of the child, was evident for experienced teachers and was also the case for all teachers regardless of sex. Both inexperienced and male teachers also appear to reinforce males for masculine behaviors. As well, male teachers tend to be more positive in affect towards all children, however, the same parallel could not be drawn for inexperienced teachers. The remaining variables in the teacher presage characteristics group

tend to involve only one study or several studies examining the same variable in different ways, therefore trends could not be identified.

Teacher Behaviors

While the variables reviewed under the general heading of Teacher Presage Characteristics tended to focus primarily upon the relationship of those characteristics to the behavior of the teacher in the classroom, this section will deal with the teacher's behaviors and the impact these behaviors have upon child behaviors and the adult/child interactive processes in the classroom. Approximately 20 independent variables will be examined in relation to approximately 60 dependent variables. As a certain amount of overlap exists among the independent variables to be reviewed, these variables will be reviewed in clusters where possible.

Teacher Feedback

One researcher, Becher (1978) examined teacher feedback in relation to child behaviors through use of a correlational analysis technique.

Child behaviors. Becher (1978) found that teacher feedback regarding the correctness of a response was negatively related to mathematics achievement.

Although this study is a correlational one and is the only one in the sample having to do with teacher feedback in general, when considered in the light of other variables to be presented regarding specific types of teacher feedback, will add another viewpoint from which those variables may be considered.

Teacher Praise and Positive Reinforcement

The use of teacher praise and positive reinforcement has been investigated in relation to a number of child behavior variables and by a large number of researchers. Furthermore, unlike all of the

variables reviewed to this point, a consensus appears in the literature regarding this variable.

Child behaviors. The following variables were investigated by researchers in relation to teacher praise and the use of positive reinforcement: attending (Geller et al. 1975); learning, as measured by the number of correct responses, (Geller et al. 1975); task persistence (Hamilton et al. 1978; Krantz et al. 1979); child social interaction (Holmberg, Thomson, and Baer, 1972; Strain et al. 1979); student participation (Reitz, 1979); cross-sex cooperative play (Serbin et al. 1977); cleanliness behavior (Taylor and Kratochwill, 1978); and prosocial behavior (Wusterbarth and Long, 1977). In all cases, except Strain et al. (1979) in which marginal effects of an increase in social interaction were reported, the behavior toward which the teacher praise or positive reinforcement was directed was observed as increasing. Thus it would be fairly un-presumptuous to state based upon the research evidence provided that teacher praise and positive reinforcement serve to increase the behavior toward which they are directed. In reflecting upon the correlational study conducted by Becher (1978) in light of the foregoing evidence, it could be likely that the correlation regarding mathematics achievement and teacher feedback may have been different had the teacher feedback been partialled out into feedback for correct responses and feedback for incorrect responses.

Teacher Criticism

Hamilton et al. (1978) examined this variable in relation to task persistence in both the classroom situation and an experimental situation. The findings tend to complement those regarding the variable of teacher praise and positive reinforcement.

Child behaviors. Hamilton et al. (1978) found that children who received teacher criticism in class not only demonstrated lower in-class on task scores but also lower experimental on task scores.

Teacher Primes

The pattern of studies considering teacher primes closely parallels that of teacher praise/reinforcement. Several researchers investigated this variable, all in relation to child behaviors that are affected.

Child behaviors. The following variables were investigated in relation to teacher primes: motor behavior (Hardiman, Goetz, Reuter, and LeBlanc, 1975); child social interaction (Holmberg et al. 1972; Keogh, Miller, and LeBlanc, 1973; Peck, Apollini, Cooke, and Raver, 1978a; Wishon et al. 1979; Strain et al. 1979); and task persistence (Krantz et al. 1979). All researchers, except for Strain et al. (1979) who reported marginal increases in the social interactions of children, found that the use of primes by teachers served to increase the behavior toward which they were directed. Krantz et al. (1979) found that the combination of proximity/reinforcement/prompting was the most successful, followed by proximity/prompting, and proximity/reinforcement. All of those combinations were observed by Krantz et al. (1979) as being more effective than a condition in which none of these types of teacher feedback were given. As well, Rintoul (1975) noted that child/child verbalizations increased when teacher verbalization was decreased and when decreased teacher verbalization was combined with teacher primes. Rintoul (1975) also found that child to adult verbalization decreased as a result of the above measures.

In a somewhat different vein, Guralnick (1978) reported that teachers tended to give more primes to less advanced children, however the absolute differences between the number of primes given to less

and more advanced children proved to be small.

Thus, once again, it would appear that there is a consensus in the literature regarding the use of teacher primes which would allow one to conclude that the use of teacher primes serves to increase the behaviors towards which they are directed.

Teacher Attention

Hardiman et al. (1975) and Yawkey and Jones (1974) investigated the variable of teacher attention to determine what effects it had, if any, upon child behaviors. These studies further complement the results of the set of variables presented on various types of teacher feedback.

Child behaviors. Hardiman found that teacher attention did have the effect of increasing a child's performance with respect to motor behaviors, however, Hardiman et al. (1975) also noted that teacher primes proved to be more effective than teacher attention. Yawkey et al. (1974) also reported that the attention of the teacher served to promote an increase in task completion by children.

Teacher Attention to Cooperative/Aggressive Verbalizations of Children

Slaby and Crowley (1977) studied a very specific type of teacher attention--attention given by the teacher to the cooperative or aggressive verbalizations of children--to determine the effects of that differential attention.

Child behaviors. Slaby et al. (1977) found that not only did cooperative behavior increase when teacher attention was given to cooperative verbalizations, but aggression decreased. When a teacher attended to aggressive verbalizations, Slaby et al. (1977) observed that cooperative behavior decreased but there was no overall change in

aggressive behavior.

The findings of Slaby et al. (1977) serve to indicate that teacher attention to positive behaviors of children may be more effective overall than attention toward negative behaviors. When combined with the findings reported on teacher attention in general, the findings of the study conducted by Slaby et al. (1977) serve to reinforce once again the positive effects that teacher feedback of a positive nature can have.

Provision/Nonprovision of Reward; Task Difficulty/Reward

These variables will be dealt with together because of their similarity and because of the few studies done in the area. Sacks, Moxley, and Walls (1975) and Loveland et al. (1977) studied the effects of the provision or nonprovision of a reward by teachers while Bucher and Okovita (1977) examined the effects that task difficulty and the provision of a reward would have upon task completion.

Child behaviors. Sacks et al. (1975) reported that the child/child and adult/child interactions of children could be increased through the use of rewards and that this increase in interactions could be maintained in the non-reward condition phase of the study. Bucher et al. found that when hard tasks were rewarded, easy tasks were also well done, however performance on the non-rewarded hard task was lower than for the rewarded one. As well, Bucher et al. (1977) observed that when easy tasks were rewarded, performance on both the rewarded and non-rewarded tasks was lower. In a somewhat similar study, Loveland et al. (1977) noted that for children who were high on intrinsic interest, reward of tasks served to lead to less interest, whereas no reward led to maintained high interest, but for children low on intrinsic interest, a reward served to initially increase the interest of the children,

however this interest was not maintained.

Thus, the results of the effects of rewards on children's behaviors are somewhat conflicting. While it would appear that rewards can lead to a maintenance of the behavior desired, as in the Sacks et al. (1975) study, the study by Loveland would appear to contradict this. It would also appear that children weigh the benefits of the performance of a task and then perform accordingly, as in the Bucher et al. (1977) study. However, these speculations are based only upon the results of a few studies in which no consensus was reached and therefore no generalizations can be made.

Teacher Proximity

Only one research group (Krantz et al. 1979) investigated the effects of the proximity of a teacher upon the child's behavior. In this study, the investigation of teacher proximity was also combined with that of reinforcement and prompting to determine the effects it would have upon the task persistence of children.

Child behaviors. Krantz et al. (1979) found that teacher proximity was effective in increasing the task persistence of young female pre-school children, however the most effective technique in increasing task persistence was the combination of verbal reinforcement, prompting and proximity.

Adult Interaction in Sociodramatic Play

Adult interaction is, in some senses, another facet of teacher attention. Lovinger (1974) examined the adult interaction in a child's sociodramatic play in relation to two specific child behaviors--complexity of play and language.

Child behaviors. Lovinger (1974) found that not only did the complexity of play increase, but the number of words emitted during socio-

dramatic sequences also increased. An increase was also evident for boys on the ITPA. Thus, the attention a teacher provides would again appear to have a beneficial effect on the behaviors of children.

Play/Skills Tutoring

In a study which is related to the Lovinger (1974) study reported above, Smith et al. (1978a, 1978b) attempted to discern if merely the adult interaction involved in play tutoring served to increase the fantasy play of children. To do so, a skills tutoring group was contrasted with a play tutored group on several measures.

Child behaviors. Smith et al. (1978a, 1978b) found that all children improved on the performance achievement measures administered, while fantasy activity, group activity in free play and role taking were higher for the play tutored group.

Teacher attention, therefore did have the effect of increasing both group's performance on the achievement measures, while the specific attention given to play did tend to have an impact on the play behavior of children. Therefore, the findings of the Smith et al. (1978a, 1978b) studies do lend further support to those of Lovinger (1974).

Verbal Instructions; Training; Modelling

These three variables will be considered together due to their similarity. Eisenberg-berg et al. (1979b) investigated the effects that instructions had upon the sharing/defending behavior of children, while Zahavi and Asher (1978) attempted to determine the effect of instructions upon various aspects of child/child interactions. Haskett and Lenfestey (1975) and Hardiman et al. (1975) were interested in the effects of training or modelling upon a skill behavior of children.

Child behaviors. Eisenberg-berg et al. (1979b) found that sharing behavior increased with age under the condition of instructions, but decreased with age under the condition of no instructions. Zahavi et al. (1978), while not interested in determining an age effect, observed that instructions regarding the effects of aggression upon others had the effect of decreasing aggressive behavior, increasing positive active behavior, and not affecting the inactive behavior of aggressive children. Hardiman et al. (1975) also indicated that training in motor skills did improve the skill level of children. Finally, Haskett et al. (1975) observed that the modelling of reading behavior served to increase the reading behavior of children exposed to such teacher behavior.

Despite the variation within this group of studies, a trend does seem to appear indicating that teacher instruction of various sorts does appear to enhance the behaviors toward which it is directed.

Teacher Structured/Unstructured Activity

A variety of dependent variables were investigated by researchers in relation to teacher structured/unstructured activity, however little commonality existed across studies in the dependent variables investigated. Thus, what results from an examination of these variables is a broad picture of child behaviors and adult/child interactions in each of these settings.

Child behaviors. Emmerich (1977), Huston-Stein et al. (1977) and Connolly and Smith (1978) all found that fantasy play was higher in unstructured (non-teacher directed) settings than in structured (teacher directed) settings. While Emmerich (1977) reported that cooperation, compliance, and affiliation with peers was higher in unstructured settings and Connolly et al. (1978) observed that there was a higher rate of social interaction in unstructured settings. Shores et al. (1976)

indicated that social interaction was at its highest in a teacher structured play situation as opposed to a no teacher involvement situation and an active teacher involvement situation. Although the novel use of materials was low in general, Carpenter (1979) found that it was higher in a low structure situation than in a medium structured situation. Autonomous achievement and gross motor activity were observed by Emmerich (1977) as increasing over time in the unstructured setting. An interaction effect was noted by Carpenter et al. (1978) with males participating more in high structure activities, however in a later study, Carpenter (1979) found the opposite, that is males participated more in the low structure setting while females participated more in the high teacher structure condition. Becher (1978) also noted that an indirect teaching approach was more effective in increasing mathematics achievement in young children.

Compliant behavior was found to be higher in the structured situation by Carpenter (1979), Carpenter et al. (1978) and Huston-Stein et al. (1977). As well, Emmerich (1977) noted that cognitive activity increased over time in the structured situation but decreased over time in the unstructured setting. In relation to cognitive activity, Connolly et al. (1978) found that the attention span of children was higher for children in a structured, rather than an unstructured setting. Unlike Connolly et al. (1978), Huston-Stein et al. (1977) reported that task persistence was more evident in children in the low structured setting, however, Huston-Stein et al. (1977) attributed this finding to the ethnic differences between the groups of children under observation. Morrison et al. (1978) further indicated that task persistence was highest when children were engaged in independent seat work, than when involved in whole class recitation or under the con-

dition of continuous central signal emission (e.g. teacher reading a book, children watching a film). As well, Huston-Stein et al. (1977) reported that aggression was much lower in structured classes than in unstructured classes.

Adult/child interaction. While Connolly et al. (1978) reported that verbal interaction with the teacher was higher in the low structure situation, Huston-Stein et al. (1977) found no differences in spontaneous social interaction between settings and Shores et al. (1976) indicated that teacher/child interaction was higher under the condition of active teacher involvement as opposed to no teacher involvement or teacher structured free play. Thus little consensus exists in relation to adult/child interaction in structured and unstructured settings.

Teacher behaviors. Emmerich (1977) observed that teacher controlling behavior was higher in the teacher structured setting than in the unstructured free play condition.

Thus, as indicated previously, a picture of life in unstructured and structured settings appears to be developing which, although there does seem to be some agreement in the literature upon the patterns of each setting, is an area in need of further research so as to consolidate the findings which have been reported. One study (Beller, 1974) which dealt with these variables has not been included in this section because of the strong interaction effects which are included in terms of heterogenous and homogeneous combinations of age and social class within the setting. This study will be reported in Chapter V which deals with setting characteristics.

Teacher Presence

The variable teacher presence is closely related to teacher structured activity. In fact, one researcher (Cooper, 1979) defined

teacher structured activity as teacher presence, in contrast to other researchers who considered structured activity as including some aspect of teacher directedness or teacher involvement. Therefore, Cooper's work will be reviewed under the variable of teacher presence as will the work of four other research groups (Pastor et al. 1978; Krantz et al. 1979; Johnson et al. 1979; Tyler, Foy, and Hutt, 1979) who investigated the effects of teacher presence upon the behaviors of young children.

Child behaviors. In an examination of the overall frequency of a teacher's presence, Pastor et al. (1978) observed that special class teachers were more frequently present during the activities of children in their classes than were teachers or regular classes. Johnson et al. (1979) compared the effects of no adult presence, to passive adult presence to active adult presence and reported that children did increase their frequency of usage of an area when a passive adult was present but there was little carry-over effect in the absence of the adult, whereas the presence of an interactive adult greatly increased the frequency of usage of an area by children and resulted in a carry-over effect in the adult's absence.

Krantz et al. (1979) found, as previously reported, that task persistence increased in young children when an adult was present, however, the most successful method of increasing the task persistence of young children was to utilize a combination of teacher presence, proximity and reinforcement. Similarly, Tyler et al. (1979) reported that the attention span of young children increased in the presence of an adult as contrasted to the absence of an adult. Tyler et al. (1979) noted that this effect was stronger for play groups than nursery schools, and stronger for nursery schools than nursery classes.

In the study by Cooper (1979), a teacher's presence had the effect of decreasing conversation. Older boys were also observed as talking more when the teacher was absent. Furthermore, in the Cooper (1979) study, while older children tended to inform younger children in the teacher's absence, only older girls continue this procedure in the teacher's presence. Suggesting was also observed as increasing for older children in the presence of an adult in the research work completed by Cooper (1979).

Teacher Questions

Turner et al. (1975) attempted to discern the differential impact of high level and low level questions upon the performance of children on two measures. Teachers, as part of a course, learned about various orders of questions and then were requested to systematically apply low level questions for a period of five weeks, high level questions for another five weeks, and low level questions for the next five weeks. Observations were made on the frequency of teacher questioning behavior and at the end of each five week period children were tested.

Child behaviors. Performance on both the Shafte1 Photo Problems, which required the child to generate verbal solutions to a problem posed in a photograph, and the Similarities Test, which required children to give as many similarities as they could discern between two objects, increased after the period of high order questions but decreased after the periods of low order questioning.

Teacher Contacts

This variable was studied quite differently by two research groups (Kennedy, 1976; Strain et al. 1979). Kennedy (1976), in a descriptive study, reported upon the number of contacts each child in the class received and Strain et al. (1979) was interested in the child's response

to those contacts.

Child behaviors. Kennedy (1976) observed that within the classroom only a few children receive a large proportion of the teacher contacts given. In Kennedy's study, one child received over one half of the integrative teacher contacts, four children received over one half of the dominative teacher contacts which involved conflict, and one child received almost one third of the dominative teacher contacts involving conflict.

Strain et al. (1979) observed that a positive contact initiated by adults tended to be consistently ignored by children whereas a negative contact by adults was ignored but accompanied by negative behavior on the part of the child.

Due to the diversity in the two studies reviewed for the variable of teacher contact, little statement about their relatedness can be made.

Teacher Verbalization

Rintoul (1975) investigated the effects that infrequent teacher verbalization would have upon the child/child and adult/child interactions within the classroom.

Child behaviors. Rintoul noted that child/child verbalization increased under the condition of decreased teacher verbalization, and was observed as increasing even more when decreased teacher verbalization was combined with the use of teacher primes.

Adult/child interactions. Child to adult verbalizations were also reported by Rintoul (1975) as decreasing when teacher verbalizations decreased, and were observed as decreasing even further when decreased teacher verbalizations were combined with the use of teacher primes.

Teacher Self-recording

Unlike many of the other variables reviewed under the Teacher Behaviors group of variables, the variable of teacher self-recording was considered in relation to teacher behaviors rather than child behaviors. Only one research team (Holmberg et al. 1972) delved into the effects that a teacher's recording of his or her own behavior would have upon that behavior.

Teacher behaviors. Holmberg et al. (1972) observed that both the teacher rate of priming behavior and the rate of teacher reinforcement increased with the use of the teacher's recording of his or her own behavior.

Summary

The group of variables housed under the title Teacher Behaviors has been the most useful one in terms of the production of tentative generalizations based upon the research literature included under this title. The strongest statements which can be made are in the area of the use of teacher primes and teacher praise/positive reinforcement. In general, it can be stated that the use of teacher praise/positive reinforcement and teacher primes serve to increase the behaviors toward which they are directed. Furthermore, the general trend from the variables reviewed in this group as a whole would appear to indicate that any form of teacher feedback which is positive or even neutral, if directed towards enhancing a particular behavior in children will typically have the desired effect.

Summary

This chapter has reviewed the variables in the sample of studies under review which were concerned with teacher presage characteristics and teacher behaviors. While only about 50 studies were reviewed in

this chapter in total, it should be apparent that these studies are more cohesive in nature than the 100 studies reviewed in Chapter III. From the 50 studies strong trends could be identified and tentative generalizations could be made. This does not negate the need for research in the area, especially with respect to certain variables which were studied by only one or two researchers, however, by basing research upon what appear to be fairly broad generalizations, a network of possible relations springing from those generalizations may be envisaged.

CHAPTER V

THE SETTING

Settings may have as individualistic characteristics as the individuals which inhabit them. This chapter, rather than attempting to probe into the differences of settings, will attempt to ferret out the commonalities which settings may have with regard to the behaviors of the teachers and children who spend a large portion of their day in them. While it may be true that the classroom settings for pre-school education may be relegated into the "unsystematic realm" by some, such as Brophy (Note 1), this chapter will attempt to shed some light on what preschool classroom settings are like and the impact those settings have upon teachers and children.

Unlike the previous two chapters in which presage characteristics and behaviors of the child/teacher constituted the major groupings of the variables, the variables which relate to the setting will be arranged topically. The topical groupings of the variables which will be discussed are as follows: (a) classroom materials, areas and organization; (b) programming variables; (c) variables relating to time; (d) class/group size and child/teacher ratio variables; and (e) other variables relating to the setting.

Classroom Materials, Areas and Organization

Included in this grouping of variables are variables concerning the frequency of use of areas within the classroom, the effects of varying spatial densities in the classrooms, the kinds of materials in the classroom, and the effects those materials have upon the behaviors of the child, and variables dealing with the partitioning of areas

within the classroom. These variables are discussed in relation to over 40 dependent relationships.

Area/Setting Within the Classroom

The variable of area/setting within the classroom has been related to the child's behaviors in those settings or areas. Sex stereotypic behaviors in relation to settings were previously reviewed in Chapter III and will not be included in this chapter.

Child behaviors. Beehler (1974) in reporting on the rates of social behavior in particular areas of the preschool classroom indicated that rates of social behavior were higher in transportation toys, role play, climbing/running/tumbling, and block areas and tended to be lower in sand, water play, books and records, science and other areas. In contrast, Brenner (1976) and Patterson (1976) noted that there was no difference in social interactions in terms of area and Tyler (1975) reported that social interactions were highest in the block area. Furthermore, Patterson (1976) reported that assertive interactions varied from center to center with the art area being the scene of six percent of the total assertive interactions; blocks, the scene of 28 percent of total assertive interactions; and dramatic play being the scene for 22 percent of the total assertive interactions.

Brenner (1976) reported that males used the least structured area for make believe, while females used it for exploring and noted that the household area elicited almost twice as much make believe behavior as did any other area.

Thus, the use of play areas by children in preschool settings does not appear to form any consistent pattern and as a result trends cannot be identified.

Classroom Organization and Space

This variable is primarily concerned with the effects of partitioning off areas in the classroom. The major emphasis placed by researchers of this variable was upon the behavior of the child however teacher behaviors and adult/child interactions were also considered.

Child behaviors. Brown et al. (1979) reported that the number of barriers in a classroom, the number of complex play units, and the number of children present accounted for 23 percent of the variance in social play level of children. Connolly et al. (1978) also noted that smaller spaces had the effect of curtailing the physical activity of children.

Field (1980) was interested in examining two factors of the classroom setting--ratio and open/partitioned spaces. The following behaviors were observed as being higher in classroom A (1:12 ratio, partitioned) as contrasted to Classroom B (1:12 ratio, open) and C (1:4 ratio, partitioned), which were higher with regard to these behaviors than Classroom D (1:4 ratio, open): parallel, associative, cooperative play; and interactions, dyadic interactions, verbal interactions and fantasy interactions. Unoccupied/onlooked behavior was reported as being higher in Classroom D (1:4 ratio, open) than in Classrooms B and C (1:12 ratio, open; 1:4 ratio partitioned), which were higher for this behavior than Classroom A. Field (1980) observed no differences between classrooms on solitary or positive play, or on the frequency of child disruptions of interactions. Because of the strong interaction effect with ratio, it is difficult to draw any conclusions regarding partitioning of space within the classroom from the work of Field (1980), except in the instances in which no differences between settings were reported.

Teacher behaviors. Teacher interactions, teacher play in the space during interaction and teacher disruption of interaction were found to be greater in Classroom D, than in Classrooms B and C, which were greater than Classroom A in the Field (1980) study.

Thus, it would again appear as though no definitive patterns can be established from the studies having to deal with classroom organization and space.

Classroom Materials and Equipment

Only one study was done on classroom materials and equipment in general however other variables dealt with specific aspects of materials used in the classroom.

Child behaviors. Brown et al. (1979) in a correlational analysis of the number of super play units in a setting and the number of social interactions in the setting, found that social interactions were negatively correlated with the number of super play units.

Novel Materials

The effects of the novelty of materials was investigated by two research teams, Haskett et al. (1975) and Keogh, Miller and LeBlanc (1973). Both groups examined these variables as they related to child behaviors.

Child behaviors. Keogh et al. (1973) reported that social interactions increased as the result of the placement of novel play equipment in an area, however, Haskett et al. (1975) found that the placement of novel reading material around a classroom had variable effects across children with regard to increasing their reading behavior.

Novelty/Familiarity of the Setting

Eson, Cometa, Allen, and Henel (1977) contrasted the effects of a novel setting and a familiar one to determine the effects that each had

upon the children's setting choices and the passive or active behavior of the children.

Child behaviors. Eson et al. (1977) found that children were more likely to prefer a novel setting to a familiar one. However, children would be more likely to select a novel setting in which they could be active rather than passive, and a familiar setting in which they could be passive rather than active.

Because of the differing aspects of the novelty of materials and settings which were examined by researchers, few trends are discernible from this group of research works.

Activity/Passivity of the Setting

The amount of activity or passivity built into a setting was studied by Eson et al. (1977) and Hawn, Holt, and Holmberg (1973). The child behaviors focused upon by these researchers were attending and active/passive behavior.

Child behaviors. Eson et al. (1977) reported that the amount of activity or passivity built into a setting did not affect the child's choice of setting, however, as reported earlier, an activity/novelty, passivity/familiarity interaction was notable, with children preferring novel settings in which they could be active and familiar settings in which they could be passive. Hawn et al. (1973) observed that children were more likely to attend in a passive setting if it had been preceded by participation in an active setting.

Films, Materials

Friedrich-Cofer et al. (1979) attempted to determine which combination of the variables, films, materials and teacher training, was most effective in promoting prosocial behavior in children.

Child behaviors. Relevant films, play materials and teacher training were reported by Friederich-Cofer et al. (1979) as being the most effective in increasing prosocial behavior in young children, followed by the films and play materials condition, which, in turn, was followed by the films alone condition. Each of these combinations was reported as being more effective than a neutral condition in which no materials, films or teacher training programs were used.

Public/Private Property

Bluebond-Lagner (1977) through participant observation investigated the sharing behavior of children and the strategies used to access property that was private or public (i.e. belonged to the school).

Child behaviors. Bluebond-Lagner (1977) found that several strategies were used to gain access to private property, however if these failed the result was usually the child requesting the sharing of a possession by another gave up on his attempts at gaining access. No one, not even the teacher, required that private property be shared. For public property, however, if the child's strategies at attempted access failed he or she could always seek recourse in the rules governing the sharing of school property.

Spatial Density

Several researchers investigated the variable of spatial density. Although the major emphasis of researchers was on the behaviors of the child under varying conditions of spatial density, Fagot (1977c) also observed the effects of this variable upon the behavior patterns of the teacher.

Child behaviors. Fagot (1977c) found no differences in the parallel play behaviors of children under varying spatial density conditions, however, did report that positive social interaction was greater under

low density conditions than under medium or high density conditions and playing alone was observed to be a more frequent occurrence in high density conditions as compared with medium or low density conditions. Connolly et al. (1978) noted that there was a decrease in social interactions when the average space per child fell below 15 square feet, however, no differences in interactions were observed when the spatial density was 25, 50 or 75 square feet per child. While Connolly et al. (1978) observed an increase in aggressive behavior on the part of children when the average space per child was 15 square feet, Fagot (1977c) found no differences in the amount of negative social interaction in settings of 3.8, 7.6 and 34.3 square feet per child. Shapiro (1975b) also noted that noninvolvement tended to be higher in classrooms of less than 30 square feet per child and random exploratory behavior tended to be higher in classrooms of greater than 50 square feet per child.

Teacher behaviors. Fagot (1977c) found no differences in the following behaviors of teachers under varying spatial density conditions: teacher initiations, teacher joining children, teacher commenting favorably and teacher criticism.

Because of the lack of consistency in the area of the spatial densities studied and the tendency of investigators to focus upon different aspects of children's behaviors when examining the variable of spatial density, it is not possible to extrapolate any generalizations or trends from this group of studies.

Summary

The collection of variables housed under the section Classroom Materials, Areas, and Organization appears to have little to offer in terms of the generalizability of findings or the identification of trends.

Variables Relating to the Program

Variables considered in this group are variables which form a part of the program offered in the preschool setting. In all, seven independent variables concerning the program will be reviewed. These seven variables are: (a) home, family, or center care; (b) school program, in general; (c) suburban/urban segregated/integrated preschools; (d) integrated/segregated preschools for handicapped children; (e) homogeneous/heterogeneous age/social class programs; (f) bilingual programs (Spanish/English); and (g) parent involvement in the program. The seven variables listed have been studied in relation to over 130 dependent relationships in total.

Home/Family/Center Care

The studies reviewed under this variable have investigated the kinds of care a child may receive in the home setting, in a family day home or in center care. These variables have been examined by several researchers in relation to the behaviors of the child, the behaviors of the teacher and adult/child interaction.

Child behaviors. Cochran (1977) observed that exploring behavior was more frequent in home and family daycare but playing was more frequent in the center setting. As well, Gunnarsson (1978) noted that although there were no significant differences between types of care for imitative behavior and role play, there was a tendency for girls, especially those in homes to demonstrate more of these behaviors. Also in terms of play behaviors, Howes (1978b) found that children in centers tended to make more use of nonportable objects in their play than children in family daycare settings, however this behavior may have been more a result of the design of the setting rather than an actual preference on the part of the children in those settings.

Social interactions of children were examined in both general and specific terms by the researchers investigating those variables in relation to the different types of settings in which care was provided. Johnson (1979) found that the proportions of social and non-social tasks were quite similar between homes and centers. In terms of the frequency of socially directed behaviors within the family daycare and center daycare settings, Howes (1978a) reported that no differences existed. A difference did appear, however, in the time children spent in procuring services from others. Johnson (1979) indicated that home children spent more time in the procurement of services than children in center care. Gunnarsson (1978) noted a sex difference for the overall amount of peer interaction with no differences between girls in centers or homes, but with boys in centers having a higher frequency of peer interactions in the center settings.

Cooperative activity was one of the specific aspects of social interaction which was investigated. While Johnson (1979) reported that center children spent more time cooperating with others than home children, Gunnarsson noted that cooperative activity was demonstrated more often by center boys than by home boys or center or home girls. Gunnarsson (1978) also reported that a similar effect occurred for boys in relation to information sharing. Two other specific aspects of social interaction--open conflict and justification of commands made to peers--were found by Gunnarsson (1978) to be more frequent of the behavior of children in centers than children in homes. Howes (1978a) also found an interesting pattern develop with respect to the behaviors of children in terms of the oldest child in the setting. In family daycare there was a heterogeneous age grouping (oldest child ranging in age from 19 to 60 months) while in center care the grouping seemed

to be homogeneous (oldest child ranging in age from 22 to 36 months). While no relationship existed between the oldest child and peer behaviors in the center setting, in the family daycare setting the behaviors of more talking, more aggression, and more imitation of a behavior directed toward him or her were found to be associated with the oldest child in the setting.

In terms of children's performance on affective and/or achievement measures, a pattern of no differences between children was found for several of the measures. Cochran (1977) reported no differences between home and family daycare children on the Griffiths Scale and Gunnarsson (1978) also indicated that results were similar for home and center children. Taylor (1975) too reported no differences between full time daycare children, part time daycare children and home children for the Assessment of Children's Language Comprehension Test. While no differences were evident on the pretest of full time, part time and home children using the Behavioral Maturity Scale, the part time children scored higher on the post test in Taylor's (1975) study. Cochran (1977) also reported no differences between home, family daycare and center daycare children with regard to informal separation exercises, however Ragozin (1980) indicated that daycare children demonstrated less interaction with a stranger than did home children on the Strange Situation Test. The behavior of children in homes and centers was similar as well on the doll play dilemmas presented to them in Gunnarsson's (1978) study. Interestingly enough, children from both settings had the doll disobey the parent more often than not and this response was observed to be slightly higher in home children. The frequency with which a child was engaged in cognitive verbal activities

was noted by Cochran (1977) to be higher in homes than in centers when the child was involved in adult child interaction.

Teacher/adult behaviors. As a descriptive element in Howes (1978b) study, it was noted that while family daycare workers had more experience as mothers than did center workers, center workers had more special training than did family daycare workers.

Gunnarsson (1978) reported that adults in centers used more "do's and don't's" and less direct instruction than did home adults. Howes (1978b) however reported that there was a higher use of restrictive and negative behaviors in family daycare than in center care. Gunnarsson (1978) further indicated that sex differences were operating in terms of positive and negative reinforcement and the use of justification by adults. Specifically, Gunnarsson (1978) found that positive reinforcement was used more frequently with girls than boys, especially in homes, negative reinforcement was used more frequently with boys in both centers and homes, and no difference in the use of justification by adults appeared in centers however girls in homes tended to receive more.

Adult/child interaction. Cochran (1977) reported that there was a greater likelihood of a child being carried by an adult in the home and family daycare setting than in the center setting, while Tyler et al. (1980) indicated that physical contact between the child and the caregiver was minimal in homes and centers.

In spite of Ragozin's finding that daycare children were less likely to interact with a stranger in the Strange Situation Test, Ragozin (1980) also reported that in the natural setting, daycare children demonstrated age-appropriate attachment behaviors. Howes (1978b) as well reported that there were no differences between home

and center children in dependent, positive affect, and imitation of adult behaviors.

With regard to adult/child interaction, there were several conflicting findings reported by the researchers investigating this variable. Gunnarsson (1978) reported that there was less adult/child interaction between boys and adults in centers than between boys and adults in homes, while there were no apparent differences between the amount of adult/child interaction engaged in for girls in centers or homes. Cochran (1977), however, indicated that there was more adult/child interaction in homes and family daycare settings than there was in centers. Howes et al. (1978b) also found that children in family daycare were more likely to use positive social skills in interacting with caregivers. Tyler et al. (1980) too found that there was a greater tendency for adults and children to talk to each other in the home setting than in the center setting. Gunnarsson (1978) observed that when adults were involved in social interaction with children both in the home and center setting, they were more likely to use more teaching and small talk with male children and more requesting and demanding with females. Although it would appear that the majority of researchers observed a greater amount of social interaction overall between the adult and the child in the home rather than the center setting, these results may have been different had the researchers partialled out their findings into male/female for the children to determine if sex was a factor in the distribution of adult/child interaction, as in the Gunnarsson (1978) study.

Summary. The strongest patterns which emerge from this collection of studies are with regard to children's performance on performance achievement measures, children's attachment behaviors and adult/child

interaction. No strong differences appeared for children in either setting for the performance achievement measures, or in terms of attachment behaviors in the natural setting. Differences favoring the home setting did appear in terms of overall adult/child social interaction. The remaining variables considered in this group of research works do not provide any clear insights into the differences among settings. In view of Gunnarsson's (1978) findings in terms of sex differences in adult/child interaction, as contrasted to the other research results which considered that variable, it is evident that further exploratory research is needed in that area.

School Program

Housed under this variable are a variety of programs ranging from Head Start, to Montessori, to formal programs, to discovery based programs, to multi-generational programs among many others. The intention of the inclusion of all of these types of programs under one general heading of school programs is not to determine the salient features of each program but is to determine if, indeed, programs do make a difference in terms of the behaviors of teacher and child and the interaction of adults and children in those settings. In some cases, school differences will also be considered.

Child behaviors. In a comparison of formal and discovery based approaches to preschool education, Johnson et al. (1980) noted no differences between the two programs in the use of props in play and the amount of social play in which the children engaged. Differences did appear in other types of play behaviors. Johnson et al. (1980) reported that children in the formal program succeeded in having more total transformation in symbolic play, and were involved in more constructive play, whereas children in the discovery based program engaged

in more functional play and more non-play behaviors. As well, Edwards et al. (1979) observed that handicapped children did not engage in as much cooperative play as nonhandicapped children when involved in Piagetian based program choices, however Edwards et al. (1979) suggested that this could be due to the absence of articulate speech in the handicapped children rather than a preference on their part.

In terms of the child's operation in the physical setting, Berk (1973) observed that children from the Head Start programs demonstrated a low activity pattern while Montessori children were observed as having a high activity pattern. Montessori children were also found to spend the least time in negative behaviors when contrasted to other preschool groups (Reuter et al. 1973). For the classes in the Pastor et al. (1978) study, no differences were noted in the amount of disruptive behaviors in which children engaged. As well, Edwards et al. (1979) reported that child self-direction was higher for nonhandicapped children than handicapped children when involved in Piagetian based program choices.

Both Fagot (1973) and Rosenberg (1976, 1977) observed that differences existed between programs in terms of task persistence. Karlson et al. (1973) indicated that performance on the Merrill Palmer differed for children of different programs, with children from Head Start programs making significant gains on this test as compared to Montessori children.

Social interactions among children of differing programs also appeared to provide evidence of both similarities and differences among children of various programs. Murphy et al. (1976) reported no differences overall for children of different programs in terms of the free time spent in engaging in social interactions, while O'Connor (1975)

observed that differences between schools were evident and Reuter et al. (1973) indicated that children in a Montessori program spent more time involved in social interactions with peers than did children in other programs. The finding of Reuter et al. (1973) must be regarded with caution because the program differences reported were influenced by differing adult/child ratios between the settings studied. Leiter (1977) observed that schools tended to be fairly similar in terms of the reciprocity in social interactions, with one school demonstrating a higher number of agree responses following an initiation which was friendly.

Specific aspects of child social interactions were examined by several researchers. Borman (1977) found that children in an open program decreased in the use of hard regulative appeals, target oriented appeals and norm-contingent appeals as contrasted with children in a traditional program. Girls in the open program also were observed as decreasing in the number of regulator/control oriented techniques used in peer interaction. Furthermore, Borman (1977) observed that children in the traditional program were not as successful in initiating conversation as were children in the open program, and this was the case especially for the girls involved. Leiter (1977), as well, observed differences between schools in terms of friendly initiations, and Murphy et al. (1976) noted that children from the Montessori program spent more time in verbal communication while children from comparison programs used more nonverbal communication in interactions.

Teacher/adult behaviors. Berk (1973) found that in all programs included for observation, among which were a Head Start and Montessori program, the following behavior patterns for teachers were common:

(a) an emphasis on transition, (b) a de-emphasis on block building and body maintenance, (c) readying the children, (d) tendency to keep non-active behavior to a minimum, and (e) participation in the activities of the children. Berk (1973) did note that the use of media experiences, such as television, was predominant in the franchise and community daycare programs. Nucci and Turiel (1976, 1978) also observed that in all programs except the Montessori, teachers were more likely to use commands in dealing with children while Montessori teachers were more likely to use requests with children.

Finally, Verma and Peters (1974) indicated that teacher beliefs did not appear to match teacher practices in a Piagetian based program. Shapiro (1975a) also observed that programs which included a high parent involvement component were observed as being more teacher directed and less child-centered than programs with a low parent involvement aspect.

Adult/child interaction. Silberman (1975), in a descriptive study, observed that the caregiver was directly involved with the child for 53 percent of the time, and passive or non-involved for 47 percent of the time.

A strong pattern of differences was apparent between programs for adult/child interaction. O'Connor (1975), Reuter et al. (1973), Kerschner (1977) and Rosenberg (1977) reported differences in the adult/child interactions between programs. In the case of Reuter et al. (1973) the Montessori program demonstrated differences, with the children enrolled in this program having less adult/child interactive episodes than children in the parent cooperative daycare or the university laboratory preschool program. Rosenberg (1977) found programs to differ on positive reinforcement, ignoring, negative reinforcement, verbal

explanations, and encouragement given by adults to children, while programs appeared to show no differences on adult interruptions, offering, showing, stopping and letting the child do something. O'Connor (1975) also observed that differences between schools were evident with regard to a child's dependency on an adult. Edwards et al. (1979) found that dependent behavior was high in program directed Piagetian settings for the handicapped child.

Summary. For the variable of program differences, the most that can be said is that programs do appear to have a differential impact upon the behaviors of children and teachers for some variables. One interesting trend that was noteworthy was the tendency of the Montessori program to differ from programs to which it was compared. Undoubtedly, the interplay of the program, the child and the teacher behaviors all contribute to aspects of the differences or similarities which have been found among the various programs which have been described in this section.

Suburban/Urban Segregated/Integrated Schools

Berkeley (1979) was the only researcher investigating the variable of suburban/urban segregated/integrated schools. Inasmuch as these types of schools may provide particular types of programs, they have been included as a setting variable, however, this variable could have also been considered in terms of the child presage characteristic of race of the child. Because of the relationship of race to the suburban/urban setting characteristic, this study was placed under the setting category.

Teacher behaviors. Berkeley (1979) found that reprimand, rather than praise typified all settings--suburban, urban integrated and urban

segregated. Differences did appear on the time spent in procedural matters, the time spent on cognitive activity and the number of teacher interruptions. In all three settings, the greatest amount of the teacher's time was spent on procedural matters, however this was greater for the white segregated suburban school than for the urban integrated school. In the black segregated urban school, the teacher spent the least amount of time, in comparison to the other two settings, on procedural matters. Time spent by teachers on cognitive activity constituted the second largest amount of time spent by teachers in an activity for all three schools, however, while the schools did not differ on this variable, individual classrooms did. Finally, Berkeley (1979) observed that teacher interruptions were observed as having a much higher frequency in the black segregated schools than urban integrated or suburban schools. Urban integrated schools were higher than suburban schools on teacher interruptions however the difference was not highly significant.

Integrated/Segregated Preschools for Handicapped Children

This variable deals with a different type of integration/segregation than the variable described above. In this case, the investigator was concerned with the integration of handicapped children into regular preschools as contrasted with the segregation of handicapped children in their own special classes. Information related to this variable was presented in Chapter III in the section dealing with the child presage characteristic of handicapped/nonhandicapped child.

Child behaviors. Wilton et al. (1977) observed that the social participation level was higher for handicapped children who were in the regular preschool, however when contrasted to the level of social participation of nonhandicapped classmates, the social participation level of

handicapped children was lower than their nonhandicapped peers. More time was spent in play activity in the segregated preschool, however, when in the regular preschool, handicapped children, although demonstrating a play pattern similar to that of their peers, tended to exhibit lower play skills than their nonhandicapped peers. Finally, Wilton et al. (1977) also indicated that handicapped children were observed in more group play in the regular preschool than in the segregated program.

The findings of Wilton et al.'s (1977) study complement those reported regarding the child presage characteristic of handicapped/non-handicapped which suggested that handicapped children do appear to benefit from integration into a regular preschool program.

Homogeneous/Heterogeneous Age/Social Class Programs

This variable is related to the child presage characteristics of age and social class, however, because of the interrelationships between the two and the fact that homogeneity and heterogeneity were designed into the study, the variable was placed in the setting category for review. In spite of the fact that only one researcher (Beller, 1974) investigated this variable, the findings reported are of an intricate nature because of the depth in which the study was conducted. Not only were the variables of the homogeneity or heterogeneity of social class and age investigated, but also considered were the differences between these groups when having to engage in free play or organized work. Thus, this variable also related to the variable of structured activity reported in Chapter IV which dealt with teacher behaviors.

Beller (1974) contrasted the following four groups: (a) classes in which both age and socioeconomic (SES) were homogeneous (H0), (b) classes in which both age and SES were heterogeneous (HE), (c) classes in which age was H0 and SES was HE, and (d) classes in which age was HE

and SES was H0. Because of the fact that this is the only study investigating this combination of variables, the results of the study will be reported but will not be discussed in any great detail.

Child behaviors. Overall, without consideration of whether the setting was one of organized work or free play, Beller found the following: (a) H0 age and H0 SES group spent the largest amount of time in goal directed behaviors; (b) a higher incidence of dramatic play in the HE SES group; (c) a higher incidence of dramatic play with others in the HE age group; (d) more cooperative play in the HE SES group; (e) more parallel play in the H0 age group; (f) a higher frequency of intentional physical contact in the HE age/H0 SES group; (g) more time spent alone in the H0 age and H0 SES groups; (g) more time spent with others in the HE age/HE SES groups; and (i) more time spent in involved looking and non-involved behavior in the H0 rather than HE SES groups.

In free play, the following differences were reported: (a) more assertive behavior toward adults on the part of the lower class children in HE SES groups than in H0 SES groups; (b) more passive/dependent behavior in H0 lower class groups; (c) more negative directive behavior in H0 lower class groups; (c) more negative directive behavior towards peers in H0 age/HE SES group; (d) more positive peer interaction in H0 age and HE SES group; (e) more negative peer interaction in H0 age and HE SES group; and more negative reaction to peers in H0 age/HE SES group.

The following differences were reported for child behaviors in the organized work condition: (a) less child affiliative behavior in the HE/HE group and most in the H0 age and HE SES group; and (b) least distracting social participation in the HE/HE group.

When organized work and free play were pooled for analysis, the following patterns resulted: (a) more positive directive modelling in the HE rather than the H0 age group; (b) a higher frequency of child affiliative behavior in the H0 lower class group and less in the HE age/SES group; (c) no differences between groups for interaction with the physical environment; (d) a high frequency of playful physical contact with peers in the HE age/H0 lower class SES group and (e) a higher frequency of cooperative peer interactions in the HE/HE groups than in the H0/H0 groups.

Teacher behaviors. The following teacher behaviors were observed as being of higher frequency in the HE SES than H0 (lower class) groups: teacher verbal interactions, teacher time spent on educational activities, teacher individual orientation, teacher use of the discovery approach, teacher sensitivity, teacher responsiveness, teacher praise, and teacher affection.

The teacher behaviors of control in general, control in the selection of materials, teacher criticism, teacher intrusiveness and teacher facilitativeness were observed as being used with greater frequency in the H0 (lower) SES than HE SES groups especially when the age group was H0.

In free play, the following teacher behaviors were noted: (a) more nondirective adult behavior in HE SES than H0 SES groups; (b) a higher frequency of caregiver initiations being accepted by children in the HE SES groups; and (c) more suggestions and help given in the HE SES groups. For organized work, more adult nurturant behavior was observed in the HE age groups, more adult physical contact in the H0 age groups, and more teacher responsiveness in the H0 SES groups. In the pooled analysis, the following behaviors were observed: (a) more adult compliance in the

HE/HE groups and least in the H0 age/HE SES groups; and (b) less adult physical contact in the H0 SES and HE age group.

Adult/child interactions. For free play, lower class children in HE groups were observed as showing more affiliative behavior and positive assertive behavior toward adults. In organized work, children in the H0 SES and HE age group were observed as staring more frequently at the caregiver. In pooled analysis, HE groups were involved in more positive adult interactions than H0 groups.

Testing--child behaviors. The HE age group demonstrated the greatest change in positive affect over time while the H0 age group either decreased or maintained their level of positive affect over time. Lower class children in the HE/HE groups increased in the amount of cooperative behavior over time while lower class children in H0 SES groups decreased. HE SES children did not persist as long at tasks while children in H0 SES groups stayed at a task for a longer period of time. HE SES groups demonstrated more appropriate use of materials while H0 SES demonstrated less appropriate use of materials. On the post-test, HE age groups were observed as decreasing in involvement but increasing in flexibility whereas H0 age groups increased in involvement and decreased in flexibility. Finally, the H0 age group declined in IQ while the HE age group increased.

Testing--adult/child interaction. HE age groups were observed as increasing in positive affect toward strangers, while children from the lower classes in HE SES groups declined in negative affect toward strange adults over time and children from the lower classes in H0 groups increased in negative affect shown towards strange adults over time. HE age group children were observed as glancing less often at their caregivers, however were more frequently observed in seeking help from adults while H0 groups were less direct.

Summary. The results presented provide only a scant overview of the study undertaken by Beller (1974), and as such, a thorough review of this work is beyond the scope of this document, however, Beller's (1974) work touches, in complex ways, many of the variables which have been reviewed in this document and therefore was too valuable to omit.

Bilingual Programs (Spanish/English)

The language of instruction and the teacher behaviors which result from the use of different languages was investigated by Townsend et al. (1975).

Teacher behaviors. When English was used as the language of instruction, in contrast to Spanish, Townsend et al. (1975) observed that there were a higher proportion of questions asked by teachers, a higher proportion of student responses, a higher proportion of rejections by the teacher of a student's response and a higher proportion of acceptance of a student's response by a teacher. When the same teachers employed Spanish as the language of instruction, in contrast to English, there were higher frequencies of direction giving, student response followed by teacher praise and the use of two or more consecutive reinforcing behaviors used by teachers.

Parent Involvement in the Program

Shapiro (1975a) investigated the effects that parent involvement in a program had upon that program.

Teacher behaviors. Shapiro (1975a) found that programs with a high parent involvement component tended to be more teacher directed than those with a low parent involvement component, which tended to be more child-centered.

Summary

The variables relating to programs do appear to offer some trends in relation to the behaviors of children and teachers. In relation to the home/family daycare/and center care settings, it appears that few differences are evident between these settings with regard to a child's performance on achievement measures or some affective measures. As well, attachment behavior in the natural setting does not appear to differ for either of these groups. A trend was also evident in terms of the amount of adult/child interaction in each setting, with the home setting being observed as having higher rates of overall adult/child interaction. The variable of programs in general, while it did indicate that programs, in some cases, do appear to affect behaviors in the classroom, did not provide any strong trends for consideration. The remaining variables reviewed in this section tended to be sole research efforts which either complemented research work previously reviewed or which stand on their own as the only effort towards investigation of a particular variable.

Variables Relating to Time

Included under this category of variables are three variables relating to time: time of day, time of year, and longitudinal effects (changes in behaviors over the course of time). Each of these will be reviewed primarily in terms of the effects they have upon the child's behaviors.

Time of Day

Hughes, Carmichael, Pinkerton, and Tizard (1979) attempted to discern what effects time had upon the amount and type of language generated by young children while Jacobs (1977) investigated the child's privacy seeking behaviors in relation to the time of day.

Child behaviors. Hughes et al. (1979) reported that there were no differences in the amount or types of language generated by children in the morning or in the afternoon. Jacobs (1977) found that time did affect the behavior of young children. Jacobs (1977) indicated that time interacted with area so that privacy seeking for particular areas was higher in the morning and for other areas was higher in the afternoon.

Time of Year

Investigators examining the effects of the time of the year generally contrasted spring and fall or first and second terms. Only two research teams (Field, 1980; Forness et al. 1975) explored this variable.

Child behaviors. Field (1980) reported increases on cooperative play and peer interactions in the second semester, as contrasted with the first. Forness et al. (1975) indicated that time on task showed a slight increase in the March observation as contrasted with the observation conducted in the fall.

Longitudinal Effects

In essence, the variables included under the category of Time of Year could also be included under the category of Longitudinal Effects, however, because of the specificity of the time mentioned were included as a separate category. As well, several studies which involved longitudinal work have not been included in this section as they have been alluded to in previous sections.

Child behaviors. An increase was observed in the following categories of play behaviors over time: group play (Smith, 1978), cooperative play (Guralnick, 1978), and the constructiveness of play (Guralnick, 1978). Solitary play behavior was reported to decrease over time by Smith (1978) and Guralnick (1978). No differences were observed over time in the observed frequency of parallel play (Smith, 1978; Guralnick, 1978),

associative play (Guralnick, 1978) or unoccupied time (Guralnick, 1978).

Plummer (1977) noted that the verbal interactions and social participation of handicapped children increased over time when handicapped children were integrated with nonhandicapped children, while Guralnick (1978) noted that nonhandicapped children reduced their interactions with severely handicapped children over time and increased interactions with mildly handicapped children. Guralnick (1978) observed a similar phenomena for mildly handicapped children who reduced their interactions with severely handicapped children over time and increased their interactions with nonhandicapped children.

Halverson and Waldrop (1976) reported that high activity levels in children appeared to be stable over the period of five years and noted that high social activity at age two and a half was related to high social activity at age seven. Fagot (1979) observed that nonsex-stereotypic behaviors changed over time when given a high amount of teacher and peer feedback.

Adult/child interaction. Emmerich (1977) indicated that both sociability toward adults and peers and affiliative behavior towards adults and peers increased over time while submissiveness towards adults and peers decreased over time.

Summary

The three variables examined under the category of time variables do indicate that a developmental change does occur for certain child behaviors over a long period of time, however, the short term effects of time such as morning or afternoon behavior preferences appear to be linked to the behavior which is the focus of study.

Class/Group Size and Child/Teacher Ratio Variables

This combination of variables covers variables which are concerned with child/teacher ratio, class size, and group size within a class. In the case of all but the last variable, these variables are out of control of the teacher and the child, and therefore constitute setting variables. Inasmuch as the variable of group size within a class is related to the other two variables within this category, it was included as a setting variable.

Child/Teacher Ratio

Six researchers investigated the variable of child/teacher ratio. This particular variable has much the same problems with regard to comparison across studies as the variable of spatial density had insofar as quite often researchers did not use the same ratios in conducting their studies. Nevertheless, an attempt at comparison will be made so as to determine if any trends exist regarding this variable.

Child behaviors. Asher and Erickson (1979), comparing ratios of 4:1, 8:1 and 12:1, found no differences in the amount of child vocalization to other children, the amount of one child touching another with approval, the amount of physical restraint of one child by another, the amount of play, or the amount of moving. While Asher et al. (1979) also reported no differences in the number of children proximal to other children, O'Connor (1975) found that this was greater at a ratio of 7:1 than 3.5:1.

Field (1980) reported a higher incidence of parallel, associative, and cooperative play at a ratio of 12:1 as compared with a ratio of 4:1. Onlooker/unoccupied play was observed by Field (1980) to be higher in a ratio of 4:1 than 12:1 and no differences were reported between ratio groups for solitary or parallel play or child disruption of interaction.

As reported earlier, in Field's (1980) work, there is a strong interaction effect between ratio and open/partitioned spaces.

Teacher behaviors. Asher et al. (1979) found no differences between ratio groups on teacher vocalization to teacher, teacher house-keeping or teacher play, while teacher moving was reported as being equal in the 12:1 and 8:1 ratio groups which had higher incidences of this behavior than the 4:1 ratio setting. Field (1980) observed that at a ratio of 4:1 the teacher was observed as being in the play space more often during interaction than when contrasted to the 12:1 ratio grouping.

Adult/child social interactions. Asher et al. (1979) found that different ratios did not appear to affect the teacher behavior of physically restraining the child and the number of teachers or children proximal to the teacher. Child vocalization to the teacher, touching the teacher with approval and the number of teachers proximal to the child were reported by Asher et al. (1979) as being more frequent in a setting with a ratio of 4:1 than a ratio of 8:1 or 12:1. Teacher vocalization to the child, teacher touching the child with approval and teacher at the child's level were all observed by Asher et al. (1979) as being more frequent in a setting with a ratio of 12:1 than one with a ratio of 4:1 and least frequent in a ratio of 8:1.

A trend was evident in relation to social interactions, as the number of children to an adult increased, the number of interactions with adults decreased and with peers increased (O'Connor, 1975; Field, 1980; Brown et al. 1979; Reuter et al. 1973).

Field also noted that teacher disruption of interaction and teacher interactions were higher in a ratio of 4:1 than 1:12. Shapiro (1975b) too observed that there were a greater number of individual

as opposed to group contacts made by the teacher at a ratio of 8:1 as compared with 11:1 however once the total class size was less than 16 with a ratio of 8:1 the number of contacts did not increase, but rather decreased. As well, when the class size was greater than 22, adding another teacher did not appear to increase the number of individual contacts (Shapiro, 1975b).

Summary. One strong trend is apparent from the literature reviewed in this group, that is that as the number of children to an adult increases, peer interaction increases and adult/child interaction decreases. However, the cautionary note added by Shapiro (1975b) with respect to the possible interaction of class size and ratio is in need of further investigatory pursuit so as to add clarification to the ratio trend which has been identified.

Class Size

The variable of class size was investigated by several researchers who primarily concentrated upon the behaviors of the child that would be affected by this variable.

Child behaviors. The results of the findings on the variable of class size with regard to child behaviors exhibited are quite diverse in nature. Connolly et al. (1978) noted that there was more fantasy play in a small class and small classes tended to produce close knit friendship groups with cross sex friendships, in contrast to large classes in which there was a pattern of dispersed same sex friendships. As well, Shapiro (1975b) reported no differences in the social interactions of children in classes of different sizes, but, as indicated previously, noted that there was an interaction effect between class size and ratio. Finally, Huston-Stein et al. (1977) reported that teacher warmth and class size were highly related, and Brown et al.

(1979) found that when class size was combined with the number of super play units and the number of barriers, it accounted for 23 percent of the variance in the level of social play.

Summary. The variable of class size, because of the diversity of aspects studied and the low frequency of a large number of works agreeing upon a particular aspect of the class size effect, does not appear to offer any trends or generalizations from the research reviewed.

Group Size (Within Class)

Within a class there are typically various sizes of groups for various activities. This variable is concerned with the effects of the size of those groups upon the behaviors of young children.

Child behaviors. In a small group setting, as opposed to a large one, isolate children directed more social behavior towards peers and were the targets of more social behaviors, however, Scarlett (1980) reported that the behavior of nonisolates was not affected by the large or small group setting in terms of social behavior. Vandell and Mueller (1978) noted that the behavior of children in a group setting and in pairs was highly correlated over time.

Scarlett (1980) observed that there were no differences between the small and large groups for the manner of interacting or the amount of onlooker activity in which children engaged, however isolates spent less time unoccupied in the small group setting.

Sherman (1975) found that group glee was more frequent in large groups than in groups of less than three or four children.

Asher et al. (1979) recorded that although there were no differences for any of the child behaviors under observation with respect to group size, there was a greater frequency of the teacher touching the child with approval.

Summary. Because of the few studies in the area of group size within a class, no trends can be derived from the literature.

Summary

As a group, the variables reviewed under the category Class/Group Size and Child/Teacher Ratio Variables offer little in the manner of trends except in the case of child/teacher ratio in which the trend of peer social interactions increasing as the number of children to an adult increased was identified. Even this trend must be regarded as just that, a trend, rather than a generalization because of the nature of the class size and ratio interaction suggested by Shapiro (1975b).

Other Variables Relating to the Setting

The following variables will be reviewed in this section: observer presence, problems encountered, and whole class recitation, independent seatwork and continuous central signal emission.

Observer Presence

While the variable of observer presence was essentially a variable in every study reviewed, only one study reported on the effects of observer presence.

Child behaviors. Forness et al. (1977) found that it took approximately from four to six days for a child's behavior to stabilize so that observational research could be done.

Problems Encountered by Preschool Children

In the sense that problems developing in a setting are a part of the setting, the variable of problems encountered by preschool children is a setting variable. Charlesworth (1979), in a descriptive study, observed children's behaviors when they encountered a problem.

Child behaviors. Charlesworth (1979) observed that children solved problems with or without help about 30 to 40 percent of the time

and adults intervened in the problem about ten percent of the time. Charlesworth (1979) also reported that the behavior interrupted by a problem was resumed about 30 percent of the time.

Whole Class Recitation; Independent Seatwork; Continuous Central Signal Emission

These three variables were investigated by Oxford et al. (1979) in relation to the child behavior that accompanied them.

Child behaviors. Oxford et al. (1979) reported that off task behavior, distractibility, nonparticipatory/passive behavior and non-constructively self-directed behavior were found more frequently in whole class recitations than seatwork or continuous central signal emission conditions.

Summary

The diversity of the variables encompassed by the "other" category does not allow for comparison.

Summary

This chapter has reviewed the variables relating to the setting. Approximately 60 of the 159 studies under review were included in this chapter. From this collection of studies, a few trends emerged, however no generalizations can be developed on the basis of those trends. (a) The care provided in home, family daycare and center settings does not appear to have a differential impact upon children's performance on performance measures or on most affective measures. (b) No differences appear between children in homes or centers regarding attachment behaviors in the natural setting. (c) The amount of adult/child social interaction seems to be higher for children in home settings than in center settings. (d) Programs do appear to have some impact upon the behaviors of children and teachers, however, the extent

of this impact is not quite clear. (e) Time appeared to be related to the development of a child's social behaviors. (f) As the number of children to adults increased, the amount of peer interaction increased and the amount of teacher/child interaction decreased. The remaining variables either were studied by too few researchers or were found to have conflicting results reported, and therefore trends could not be identified.

CHAPTER VI

THE STATE OF AFFAIRS IN PRESCHOOL EDUCATION

One of the guiding purposes for conducting this review of research on classroom interactive processes in preschool education was to identify generalizations and/or trends housed in that literature. In considering the number and types of trends and generalizations which have been produced from the population of literature surveyed, it is apparent that the research literature did not house the wealth of information that was anticipated. The question of why the research had so little to offer in terms of generalizations, in particular, and trends will be addressed in the first section of this chapter.

Also, in light of the five years of research material which has been presented, preschool education will be examined from several perspectives.

The first perspective that will be dealt with is a research technique perspective. An introspective look at research in preschool education will be undertaken with a view to highlighting the weaknesses and/or strengths of the research and recommending means through which the research conducted could prove to be more fruitful.

The second perspective that will be presented will be a comparative one. That is, the trends and generalizations which have been derived from the literature which has been reviewed will be compared to the trends identified by reviewers of literature dealing with the regular school program. Thus, if commonalities or differences appear between what happens in a preschool classroom and what happens in a regular school classroom, they will be identified. Hopefully, this comparison

will allow the judgement to be made as to whether or not preschool education is all that different than regular schooling.

The third and final perspective that will be used to analyze and interpret the findings of the research literature presented will be a curriculum theory perspective. This perspective will examine, in light of the research presented, what the purposes of preschool education are and will attempt to determine if they are all that different than the purposes of schooling in general.

The Enigma of Incongruity in Research on Preschool Education

The fact that so few generalizations and strong trends could be identified from the total population of research housed in a five year span of the Current Index to Journals in Education and Resources in Education is indeed enigmatic. Explanations for this phenomenon can be wide in scope and quite varied. This section will address several possible explanations for the pattern, or rather lack of pattern, which this review uncovered. Speculations regarding the incongruity of the research in preschool education will revolve around five issues: sampling, the quantity of research, research technique, reflectivity of the actual state of affairs and a mechanistic rather than a humanistic or holistic approach.

Sampling

Although the research selected for review encompassed all of the research housed in the CIJE and RIE indices for a span of five years, it may be likely that the research gleaned from these sources is not reflective of the research that actually exists in the field of preschool education. That is, if other indices had been utilized for the purposes of this review, a different pattern of findings might have

emerged, or if a wider time span had been used, the pattern of findings generated would have been more cohesive.

Furthermore, not only are the sampling procedures for the present review a consideration in terms of the research material which was reviewed, but another aspect to be considered could be the sampling procedures used by each individual journal or publishing committee. That is, regardless of the particular indices or the number of indices used in conducting a review, the research contained within those indices is reflective of the screening procedures of an editor or an editorial panel whose job it is to deem what is and what is not publishable material. It is likely the case that many documents, either because of focus or length, remain in the realm of "fugitive literature" which unfortunately can never be considered in a review unless individual contacts were made with each and every institution involved in research on preschool education.

Quantity of Research

Apart from sampling procedures, a possible explanation for the incongruous pattern of findings in the present review may be simply that there has not yet been enough research done in the area of classroom interactive processes in preschool education. Possibly with more research a stronger pattern of findings would develop which would enable generalizations to be made across studies.

Research Techniques

While the question of research technique will be addressed in a later portion of this chapter, it may also be considered as a contributing factor to the lack of patterns in the research which was reviewed. Brophy (Note 1) has suggested

to establish something unambiguously, such a study would have to have a sufficient number of classrooms and teachers in which similar numbers of similarly aged children from comparable families (SES, ethnicity, etc.) were pursuing essentially identical goals (if the emphasis were on teachers), or were pursuing very similar goals with one carefully controlled exception (if the emphasis were on curriculum). Furthermore, there would have to be good (valid, reliable) measurement of relevant student characteristics both before and after the period of observation.

Thus, for Brophy (Note 1), the element of controlling variables would be criticism of research technique in preschool education.

Another influencing factor could be the "one-shot-ism" of the studies reviewed. That is, a strong trend throughout the research material reviewed was the preponderance of the "one-shot" type studies rather than studies which, over time, built upon the research of previous researchers. Perhaps researchers in preschool education should be concentrating upon the development of some system of prioritized research so that a stronger more cohesive set of research studies could be produced and so that critical and fundamental issues would receive attention.

Reflectivity of the Actual State of Preschool Education

Perhaps the identification of so few trends and generalizations is reflective of which actually is. In other words, perhaps preschool education is so setting or context specific that generalizations or trends can better be identified within settings rather than across settings. It may well be the case that some things may apply to all

settings all of the time, while others apply to some settings some of the time, and in areas in which there is no agreement, perhaps investigators are asking the wrong questions.

This explanation, in some senses, parallels the patterns of findings in other endeavors which deal with the human being. For example, in medical science, while a particular drug may be effective for a large portion of the population, because of the particular characteristics of a patient the same drug may not be effective for that patient. When one is confronted with the number and different types of individuals which are involved in the preschool educative process, it would appear quite plausible that there are few cross-setting generalizations which can be made, just as in medical science, the same treatment may not apply to all patients. While it may be possible, in some instances, to identify what may be the norm with respect to a particular variable, it may be unlikely, because of the particular characteristics of the setting and the people within that setting, that any definitive statements can be made that will apply to all settings all of the time. Thus, to expect that research on interactive processes in classrooms can provide cross-study generalizations may be an unrealistic and over-ambitious expectation.

Mechanistic Approach

The roots of this explanation for the lack of pattern are closely tied in with the behaviorist tradition which has dominated psychology, educational psychology and education since the 1950's. Essentially, to reduce the classroom to individual variables with predicted or even unpredicted outcomes, is to create a vast oversimplification of the human interactive process. It is almost akin to envisioning the class-

room as one large "Skinner box" in which one can state that given any child, that child can become whatever is deemed desirable given the right teaching and atmosphere for learning. To create such an oversimplification is to ignore all of the tangentially related variables which are part and parcel of the child's and the teacher's life. Perhaps, a more humanistic view or a more holistic view is necessary in order to derive the understandings of classroom life that are being sought. This understanding is not one which is arrived at from the conduct of experiments or field studies, but is one which is arrived at by retrospective analysis, in a global sense, of the preschool educative process. It is akin to a historical perspective on education, in which only after the elapse of vast periods of time can patterns be established. The fragmentation housed in the group of studies reviewed may be more a result of the fragmentation of the classroom processes into discrete behavior units which would appear unrelated to each other rather than being reflective of the actual state of affairs in preschool classrooms. Perhaps to attempt to derive generalizations from fragments of behaviors is as insidious a task as attempting to piece together a puzzle in which a large portion of the pieces are missing.

Whatever the case for the lack of patterns in the research literature which has been reviewed, the few trends that did emerge do give some indication of what life may be like in the preschool classroom. It is these trends which will be examined in terms of the research technique perspective, the comparative perspective and the curriculum theory perspective in the subsequent portions of this chapter.

A Research Technique Perspective

Unfortunately, the perspective on research technique in preschool education is a dismal one, not unlike, in many respects, the one which confronted researchers of the regular schooling system a decade or two ago. Yet, the fact that research efforts have been made in an attempt to capture the character of the preschool classroom does brighten the research picture regarding preschool education.

In what could be considered a landmark text on the study of teaching in the regular school system, Dunkin and Biddle (1974) outlined over 50 recommendations regarding the research problems that plagued research on teaching to that point in time. While the quantity of recommendations for research in preschool education do not come near the number put forth by Dunkin et al. (1974), the tenor of the task facing researchers interested in preschool education is quite similar.

Instrumentation

Several trends were notable in terms of observational instrumentation. First of all, there was a strong tendency for researchers to use a time sampling technique which entailed the development of categories particular to the behavior(s) upon which the researcher wished to focus. When prepackaged observation instruments were used, it would appear that few researchers selected similar instruments. Rather, as Table 2 indicates, rarely was the same instrument used in two different studies. The only exceptions to this were when a team or a single researchers utilized the same instrument in several studies as in the case of Fagot or Oxford, Morrison, and McKenny (1979) and Morrison and Oxford (1978).

The issue of the distance that the pre-structured categories places between the setting and the interpretation of the ongoing interaction in that setting has been addressed in Chapter II and the time factor

involved in collecting data using a non-pre-structured category system would appear to make that mode of collecting data a foreboding one without a strong monetary commitment from some funding agency and a strong time commitment on the part of the researcher. The study by Travers et al. (1977) is one exemplar of a study which must have involved extensive monetary funding for its observational and testing data collection procedures on over 1,800 children aged three and four, however, the ultimate aim of the study was to improve the cost effectiveness of daycare and perhaps was viewed as being able to save money in the long run.

If the financial and time commitments outlined are out of the realm of implementable research, then the utilization of pre-structured category systems is all that is left to the enterprising researcher of preschool education. Since it would appear that commitments requiring both money and time are unlikely in a time of economic restraint, then the task facing researchers of preschool education is the "firming-up" of categories used so that cross-study comparisons can be made and replication studies can be implemented using similar observational methods. While it is noteworthy that in virtually all of the studies reviewed, inter-rater reliability checks were made to ensure the reliability of observational data collected, it is also apparent that more work is needed in terms of the validation of observational instruments used.

The use of performance/achievement measures and social/affective measures succumbs to a different type of criticism. While the reliability and validity of the former are questionable when used with children of less than age four, the latter have been relegated to the

realm of useless information by some (Brophy, Note 1). Although some work was done by Travers et al. (1977) regarding the validity of both types of instruments, the need for researchers to develop valid instruments or to validate existing ones for use with preschool children is indeed apparent if these instruments are to be used to determine the outcomes of preschool education. Long term observational work, where feasible, may provide an interim solution for determining the effects of preschool education.

Expansion of Data Base

An interesting pattern which developed was the tendency for researchers to report the characteristics of the sample, but not include these characteristics in any subsequent analysis. Whether the authors felt that reporting was enough, or whether the reports on these variables were excluded from that particular publication is not known, however, it would seem reasonable to suggest that whenever a data base can be extended, researchers should attempt to do so. Otherwise what might be valuable information is being overlooked.

Focus on Research Efforts

In scanning Chapters III, IV and V, it becomes immediately obvious that there are a large number of "one-shot" type studies housed in the literature which has been examined. That is, a large proportion of the studies are so specific in focus that they elude any attempt at cross-study comparisons. In some cases, each individual study contributes another aspect from which a variable may be scrutinized, but because the study does not have other literature supporting or refuting it, it too must be relegated to the realm of the "one-shot" study.

Furthermore, researchers investigating tangentially related areas do not appear to draw upon each other's work. Exceptions to this are the cases in which researchers are working out of the same institution or in which one researcher, such as Fagot, has over the years built up a wealth of research material on a specific field.

Thus, the problems of the unification of research efforts and the utilization of research material which has already been produced confront researchers interested in delving into aspects of preschool education. In other words, researchers have to forego a specific, and perhaps miniscule, aspect of investigatory pursuit in favor of attempting to get at broader patterns, or at least relate that specific research effort to the research literature dealing with the preschool classroom in a more global fashion.

A Comparative Perspective

Having reflected upon the nature of the research in preschool education being produced by researchers, an attempt will now be made to relate how research conducted in preschool settings compares to research conducted in regular school settings. The two sources used for comparative analysis will be Dunkin and Biddle (1974) and Brophy and Good (1974). These works were selected because of their historical importance in the observational study of classrooms and because they were produced at a time in which research on classrooms was beginning to take shape. Thus, the comparison made will be a more equitable one, rather than one in which the result of two decades of research on regular schooling is pitted against what appears to be an emerging and developing research trend in preschool education.

Each trend or generalization derived from the literature reviewed on preschool education in the previous three chapters will be compared, if possible, to the trends and/or generalizations found by Dunkin and

Biddle (1974) and/or Brophy and Good (1974). While individual studies may lend support to the findings of these authors, they will not be used in the comparative analysis.

Aspects of the Literature Comparable to Research on Regular Schooling

The areas in which comparisons between the literature reviewed in the present document and the literature reviewed by Brophy et al. (1974) and Dunkin et al. (1974) can be made are with respect to differences between male and female teachers, the behaviors of male and female children, the use of praise/positive reinforcement, and the use of peer reinforcement.

Male and female teachers. The following trends were derived from the present review of the literature: (a) teachers reinforce feminine behaviors in children regardless of the sex of the child or the sex of the teacher; (b) inexperienced teachers and male teachers reinforce males for masculine behaviors; and (c) male teachers tend to show more positive affect towards children.

Brophy et al. (1974) reviewed several studies in relation to the sex of the teachers and the resulting behaviors of teachers. The general findings which they reported were that few differences existed between male and female teachers "in the ways they approach teaching and act in the classroom" (p. 237) and that the differences that did exist did not appear to be related to the sex of the child. However, Brophy et al. (1974) did indicate that because of the paucity of studies in the area, no definitive conclusions could be reached. Dunkin et al. (1974) noted that male teachers were more likely to be disseminators of information regarding subject matter and sociation and were more likely to talk than female teachers.

When contrasting the trends from the present review to those of Brophy et al. (1974) and Dunkin et al. (1974) it would appear that few comparisons can be made. Although it might be stretching the point made by Brophy et al. (1974) regarding the lack of differences between teachers on the basis of sex, this point could lend some support to the tendency for teachers to reinforce feminine behaviors regardless of the sex of the child.

Sex of the child. The following trends regarding the sex of the child were identified from the present literature review: (a) aggression is either higher in males or no differences exist between males and females; (b) female children are more task persistent, but males tend to be reinforced by teachers for engaging in complex tasks or for demonstrating high task interest; (c) teachers have more discipline and control contacts with males; (d) female children are more dependent upon adults, perhaps due to the encouragement of such behavior through teacher response; and (e) teachers interact differently with children of different sexes.

Brophy et al. (1974) provide support for some of the trends identified above inasmuch as teachers were observed as having more criticism and control contacts with males than with females and girls were observed as having a stronger attachment to the teacher than boys. The tendency for boys to receive more contacts of all types in the work reviewed by Brophy et al. (1974) and Dunkin et al. (1974) might indicate some support for the encouragement of males in complex and high interest tasks.

Praise, positive reinforcement. The research reviewed in the present study gave rise to the following generalization: teacher praise, primes, or positive reinforcement increase the behavior toward which

they are directed, as does almost any type of positive teacher feedback.

This generalization received support from several studies reviewed by Dunkin et al. (1974) and Brophy et al. (1974).

Peer reinforcement. The present review found that peer reinforcement tended to enhance social behaviors in children.

This trend received support from the literature review conducted by Dunkin et al. (1974).

Trends Specific to Preschool Education

The following trends were incomparable to the reviews of Dunkin et al. (1974) or Brophy et al. (1974) either because these reviewers did not review studies relating to these aspects or because these trends tend to be specific to preschool education: (a) for fantasy play, parallel play, and solitary play, no strong differences between the sexes of children emerged; (b) male and female children exhibit sex stereotypic area preferences; (c) children tend to interact with the same sex classmates and tend to reinforce sex stereotypic behaviors; (d) no trends appeared regarding sex differences in terms of affective behaviors; (e) atypical children interact with both other atypical children and normal children; (f) the play patterns of handicapped children do not tend to be as competent as their peers; (g) integration with nonhandicapped children tends to enhance the development of social skills in handicapped children while not deterring the social growth of nonhandicapped children; (h) young children do appear to have a conscious awareness of the societal structures operating within the classroom; (i) children who are high social interactors also tend to have higher role taking skills; (j) the placement of a child at home, in a family daycare or in center daycare does not appear to

affect performance on achievement measures or on most affective measures; (k) children in the home setting or in the center setting do not appear to differ in terms of attachment behaviors in the natural setting; (l) adult/child interaction appears to be greater in the home than in a center setting; (m) programs offered for young children do appear to have a differential impact, but the extent is not clear; (n) the passage of time is related to development; and (o) as the number of children to an adult increased in a setting, the number of peer interactions increased and the number of adult/child interactions decreased.

For the greater majority of the trends just listed, comparison with the results of reviews on regular schooling were impossible because these trends were closely related to organizational aspects of pre-school education which are specific to preschool education. In contrast, where comparisons were able to be made, it was more likely for those comparisons to deal with the human aspect of education, that is the adult/child interactive aspect.

Thus, it would appear that there are some human aspects and organizational aspects upon which the preschool differs from the regular school system, and as such becomes an entity unto itself. An emphasis on play, allowing for choice of areas within the classroom, the encouragement of social interaction among children, and the integration of handicapped children into the preschool would appear to be major ways in which the preschool differs from the regular school as reflected by the literature reviewed. How and whether or not these differences fit into the overall purposes of schooling will be discussed in the next section dealing with curriculum theory.

A Curriculum Theory Perspective

Dunkin and Biddle (1974), in a less than eloquent statement regarding the description of the sample of studies which were included in their review, noted, "Among the kinds of studies with which we are not concerned are: investigations conducted with white rats, monkeys, planaria, or preschool children" (p. 3). Thus, it would appear that Dunkin et al. (1974) consider preschool children out of the realm of schooling and perhaps in a less than human realm. Brophy (Note 1) has indicated that society as a whole has not come to an agreement as to the goals of a preschool education. In light of the review of research conducted in this present document, these authors might be wise to reconsider their positions. However, what the goals of schooling in preschool programs are does appear to need some clarification. Indeed the question could be posed, "Does schooling have universal goals?" and if so, "Are these universal goals manifested in the classroom behaviors of the children and teachers who enter the institution of the school regardless of grade level?"

From the descriptions of classroom life generated through the present review of research it would appear likely that there are similarities and differences in the goals of preschool education and regular schooling. When reflecting upon the tendency of preschool teachers to reinforce feminine behaviors in children regardless of sex, it would appear that teachers are encouraging a type of compliance in children which would be to their advantage if those children are to survive in the regular school system and indeed society as a whole. Apple and King (in press) have suggested that "the social meanings of events and materials are established remarkably early in the school year. As with most classroom settings, the socialization of children

was an overt priority during the opening weeks of school" (p. 16). Even the child's concepts of work and play described in Chapter III indicate that the child is developing an awareness of what is expected. Kantor (1972) has extended this notion of socialization even further to the point of suggesting that schools, even at the kindergarten level, serve to produce children that will fit into the bureaucratic system.

Pinar (Note 3) has described schooling as a type of gender ceremony. It is apparent that indeed school serves to delineate gender roles through the hidden curriculum, even in the preschool. The fact that females are never reinforced for cross sex behavior while males are reinforced for both masculine and cross sex behaviors serves to perpetuate the societal structures which are now in place. In essence, males are learning how to survive in a patriarchal system through the process of schooling--that is they learn when to comply and when to be aggressive, even in the preschool. While there is little research to indicate whether this mechanism persists throughout regular schooling, research cited by Dunkin and Biddle (1974) indicating the higher activity level and more frequent withdrawal behavior in boys and the tendency for girls to engage in activities such as reading and writing, discussing work with peers and nonacademic work would tend to lend some support to this. Even the work reviewed by Brophy and Good (1974) which indicates that boys receive more contacts of all kinds in the regular school system would lead one to conclude that regular schooling leads to the perpetuation of the existing societal structures.

Despite the similarities noted above and the tendency for pre-schools to reinforce the existing societal structures, preschools do demonstrate marked differences to the regular school system. The fact that

the literature reviewed reflected that choice of activities is included in many preschools, the fact that free play is an element of preschool education, the fact that social interaction is encouraged, and the fact that handicapped children are included in the preschool education system serve to set preschools apart from the system of regular schooling. Again the notion of social competence would appear to be a factor, but it would seem to be a social competence of a different kind than the kind described above. It would appear to be a kind of social competence which the child has to derive for him or her self, a type of socialization process in which the child has to sort out the meanings of society on his or her own, perhaps the same type of social competence that would be gleaned if the child were not in a preschool program.

Thus, it would appear that the major emphasis of preschool education is the socialization of the young child. Direct instruction would appear to have a secondary place to this process. To the extent that preschools perform a socialization function then, it would appear that they are much like regular schools, but it is this same socialization aspect upon which preschools and regular schools seem to differ. In preschools, the primary and overt emphasis is on socialization almost to the point where instruction becomes the "hidden curriculum." In the regular school system, it would appear to be the reverse, with instruction as the obvious purpose and socialization as the subliminal.

Summary

This chapter has speculated upon why there was a lack of pattern in the research reviewed and has presented the research reviewed from three perspectives--a research perspective, a comparative perspective and a curriculum theory perspective. Through the use of differing

perspectives, it was possible to examine the research from these differing viewpoints in order to get at some of the overt and hidden meanings embedded within it. Essentially, the research perspective outlined ambitious, yet necessary, tasks for researchers interested in preschool education, the comparative perspective noted that preschools are one with, but yet apart from, regular schools and the curriculum theory perspective extended this latter notion in terms of the socialization processes that occur in schools.

CHAPTER VII

EPILOGUE

In reviewing the literature on preschool education, I have attempted to provide evidence of the commonalities housed in the literature in terms of research findings and have also succeeded in outlining what appear to be vast differences in the focus of that literature. I have considered this research from several perspectives--the research perspective, the comparative perspective and the curriculum theory perspective. What I have not addressed is what all of this means to the classroom teachers who some time in the future have to greet a group of inquisitive and demanding young children, and indirectly the educators who must train those teachers. This issue is, perhaps the most pervasive of all, as it has the possibility of affecting the lives of the children and the teachers who must live in a system the boundaries of which are often established by others removed from that system.

To me, the ramifications of the research evidence are quite clear in terms of the teacher perspective and it is likely that many teachers have operated in classrooms for many years subconsciously, or perhaps consciously, immersed in the same knowledge which is contained in the research which has been reviewed. That knowledge is, quite simply, the knowledge of the impact each individual or group contact can make upon a child's life and upon the teacher's life in the classroom. It is the knowledge that the setting or an alteration in an aspect of the setting can affect the behaviors of the persons within that setting. Finally, it is the knowledge that the individual differences which children and teachers themselves bring to the classroom and the inter-

relationships among those differences can combine to make each classroom an intricate web of immense magnitude.

If in the future, when a teacher enters his or her classroom, that teacher can be more aware of the differences that the sex of a child makes in terms of the teacher contacts that child receives, or the benefits a handicapped child receives from being integrated into a regular classroom, of the benefits of praise and positive reinforcement as a teaching technique, of the difference that teacher experience may make to that teacher's teaching, of the difference that the adult/child ratio may make in terms of the kinds of contacts that the child will receive, or of the effects of the many other variables reviewed in this document, then I feel that this review has indeed offered something of value to the classroom teacher. The extent to which that teacher can modify his or her teaching and interactive behavior to try and come to grips with the kind of education he or she may want to provide for young children remains in that teacher's hands as indeed it has for centuries and will likely continue to do so for many more years.

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APPENDIX A
SUMMATIONS OF THE STUDIES REVIEWED
ACCORDING TO INDEPENDENT VARIABLES

INDEPENDENT VARIABLE: SEX OF THE CHILD

| Dependent variables | Results |
|-------------------------------|---|
| 1. vocalization to teacher | more by males (M) in adult pre-sence--Cooper (1979) |
| 2. teacher proximal | rate of proximity higher for females (F)--Serbin et al. (1973) teacher response to proximity--no difference--Serbin et al. (1973) |
| 3. analytic cognitive style | no difference--Austin (1971) |
| 4. area use and equipment use | no difference in area covered and equipment used--Austin (1971) M used more area and space--Harper et al. (1975) M preference for blocks, outside etc.--Tyler (1975), Fagot (1975, 1977a, 1977b), Berk (1973), Harper et al. (1975), Tizard et al. (1976) F preference for kitchen, inside etc.--Fagot (1975, 1977a, 1977b), Field (1980), Tyler (1975), Harper et al. (1975), Tizard et al. (1976) no difference re: familiarity/novelty activity/passivity of setting--Eson (1977) M and F used least structured area for different purposes--Brenner (1976) |
| 5. child social initiations | differences in variables related to M/F initiations--Inoff (1977) different types for M/F--Berk (1973) M initiated more--Field (1980) sex x classroom interaction--Field (1980) |

INDEPENDENT VARIABLE: SEX OF THE CHILD

| Dependent variables | Results |
|------------------------------|---|
| 6. child social interactions | different types for M/F--Eisenberg-berg et al. (1979a), Shantz et al. (1978) no differences--Brown et al. (1979) Peck et al. (1978b), Howes et al. (1978a) M more interactive--Field (1980), Gunnarsson (1978), Murphy et al. (1976) F more interactive--Travers et al. (1977) interacted with the same sex--Mays (1974), Field (1980) M more negative interaction--Reuter (1973), Tizard et al. (1976), Tyler et al. (1980), Berk (1973) no differences in positive or negative contact--Fagot (1977c), Rubin (1976) correlated with activities of the children--Eisenberg-berg et al. (1977a) |
| 7. task persistence | higher in M--Feldbaum et al. (1979) higher in F--Travers et al. (1977) Krantz et al. (1979) no difference--Oxford et al. (1979) |
| 8. cooperative play | higher in F--Field (1980), Serbin et al. (1977) higher in M--Gunnarsson (1978) |
| 9. time alone/solitary play | no difference--Fagot (1977c, 1978), Johnson et al. (1980), Field (1980), higher in F--Feldbaum et al. (1980) |
| 10. parallel play | no difference--Johnson et al. (1980), Fagot (1977c), Field (1980) higher in M--Feldbaum et al. (1980) |

INDEPENDENT VARIABLE: SEX OF THE CHILD

| Dependent variables | Results |
|----------------------------------|---|
| 11. noninvolved | for F related to total child initiations--Inoff <u>et al.</u> (1977) no difference--Field (1980) |
| 12. involved looking | for F related to total child initiations--Inoff <u>et al.</u> (1977) no difference--Field (1980) |
| 13. language | differences in language used--Mays (1974), Borman (1977) no overall differences--Cooper (1979), Lovinger (1974) |
| 14. make believe/fantasy | no difference--Brenner (1976, Field (1980), Johnson <u>et al.</u> (1980), Friederich-Cofer <u>et al.</u> (1979) |
| 15. exploratory | no difference--Brenner (1976) |
| 16. use of classroom space | no difference in M/F behavior--Field (1980) |
| 17. level of social play | no differences--Brown <u>et al.</u> (1979) |
| 18. behavior re: task difficulty | more reward for M by teachers--Fagot (1978) |
| 19. high task interest | reward for M by teachers--Fagot (1979) |

INDEPENDENT VARIABLE: SEX OF THE CHILD

| Dependent variables | Results |
|--|---|
| 20. participation in structured activity | M participate more in low structure--Carpenter (1979) F participate more in high structure--Carpenter (1979), Carpenter <u>et al.</u> (1978) no differences--Huston-Stein <u>et al.</u> (1977) |
| 21. activities of children | no differences in art or socio-dramatic play--Karlson (1973) |
| 22. choice of classmate | chose same sex classmate--Field (1980) |
| 23. communicative egocentrism | no differences--Peck <u>et al.</u> (1978b), Rubin (1976) related to amount of social interaction for F--Deutsch <u>et al.</u> (1974) |
| 24. sharing/defending | no difference--Eisenberg-berg <u>et al.</u> (1979a) |
| 25. height/weight | related to preference for M toys--Eisenberg-berg <u>et al.</u> (1979a) |
| 26. prosocial behavior | no difference--Eisenberg-berg <u>et al.</u> (1979c), Fagot (1977c), Friedrich-Cofer <u>et al.</u> (1979) |
| 27. aggression | more in M--Seegmiller (1977), Serbin <u>et al.</u> (1973), Smith <u>et al.</u> (1975), Tizard <u>et al.</u> (1976), Travers <u>et al.</u> (1977), Tyler <u>et al.</u> (1980), Berk (1973), Fagot (1975) |

INDEPENDENT VARIABLE: SEX OF THE CHILD

| Dependent variables | Results |
|--|--|
| 27. aggression cont'd | no difference--Fagot (1977c), Friedrich-Cofer et al. (1979) Missikian et al. (1974), Peck et al. (1978b), Shantz et al. (1978) F responded to more frequently--Huffine et al. (1979) |
| 28. sex stereotypic behavior | M more often engaged in M patterns and F in F patterns--Lamb et al. (1979), Fagot (1975), Etaugh et al. (1975) |
| 29. reinforcement of M/F behavior by peers | M reinforced for M behavior--Fagot (1979), Lamb et al. (1979) F reinforced for F behavior--Fagot (1978, 1979), Lamb et al. (1979) M reinforced for opposite sex behavior--Etaugh et al. (1975), Fagot (1975, 1977a, 1977b, 1978) M criticized for opposite sex behavior--Fagot (1977a) F criticized for opposite sex behavior--Fagot (1977a, 1979) |
| 30. IQ | no differences except F performed better on reading subscales--Firestone et al. (1978) |
| 31. Primary Academic Sentiment Scale | |
| 32. MAT | |
| 33. disruptive behavior | M responded to more often for disruptive talking--Huffine et al. (1979) F responded to more often for aggression--Huffine et al. (1979) M responded to more often for disruptive behavior--Serbin et al. (1973) |

INDEPENDENT VARIABLE: SEX OF THE CHILD

| Dependent variables | Results |
|----------------------------|---|
| 34. attending/learning | differential results re: M/F--Geller et al. (1975) |
| 35. seasonal play | M spent more time outdoors--Harper et al. (1975) |
| 36. motor testing | F showed gain with increased teacher support--Larsen (1975) |
| 37. role play | more in F--Gunnarsson (1978) |
| 38. people vs objects | no difference--Jennings (1975, 1977) |
| 39. apathy/withdrawal | no differences--Travers et al. (1977) |
| 40. cooperation/compliance | higher in F--Travers et al. (1977) no difference--Seegmiller (1977) |
| 41. anger/hostility | higher in M--Travers et al. (1977) |
| 42. interest/participation | no difference--Travers et al. (1977) |
| 43. peer punishment | no difference--Lamb et al. (1979) |
| 44. Piagetian task | F gained with increased teacher support--Larsen (1975) |

INDEPENDENT VARIABLES: SEX OF THE CHILD

| Dependent variables | Results |
|--|---|
| 45. quality of drawing | no difference--Turner (1978) |
| 46. ITPA | no significant difference-- Loving (1974) |
| 47. self control | tendency to be higher for F-- Toner <u>et al.</u> (1977) |
| 48. group glee | more frequent in mixed sex groups-- Sherman (1975) |
| 49. high activity level | reinforced for M--Fagot (1978, 1979) not reinforced for F--Fagot (1978, 1979) |
| 50. reciprocity | between children of the same sex-- Marcus (1977) |
| 51. child setting choice-- active/passive--novel/ familiar | no difference-Eson <u>et al.</u> (1977) |
| 52. WPPSI | change in score not associated with sex--Karlson <u>et al.</u> (1973) |
| 53. teacher social contacts | more contacts with F--Appleford <u>et al.</u> (1976) more contacts with M--Serbin <u>et al.</u> (1973), Murphy <u>et al.</u> (1976) no difference--Cooper (1979), Appleford <u>et al.</u> (1976) |

INDEPENDENT VARIABLE: SEX OF THE CHILD

| Dependent variables | Results |
|-------------------------------------|---|
| 53. teacher social contacts cont'd | different kinds of contacts with M and F--Fagot (1977b) |
| 54. teacher instructional contacts | more contacts with F--Appleford <u>et al.</u> (1976), Fagot (1973) more contacts with M--Gunnarsson (1978), Cooper (1979) no difference--Appleford <u>et al.</u> (1976), Cooper (1979), Fagot (1973) different kinds of contacts with M and F--Fagot (1977b), Gunnarsson (1978), Serbin <u>et al.</u> (1973) |
| 55. discipline and control contacts | more with M--Appleford <u>et al.</u> (1976), Serbin <u>et al.</u> (1973), Berk (1973), Murphy <u>et al.</u> (1976) different kinds of contacts with M and F--Gunnarsson (1978), Huffine <u>et al.</u> (1979) |
| 56. vocalization to children | no difference--Cooper (1979), Oxford <u>et al.</u> (1979) |
| 57. touching with approval | more to F--Tyler <u>et al.</u> (1980) more to M--Serbin <u>et al.</u> (1973) different types for M and F-- Perdue <u>et al.</u> (1978) |
| 58. teacher feedback | no overall difference--Cooper (1979), Fagot (1975) different types of contacts for M and F--Fagot (1973, 1977a, 1977b), Gunnarsson (1978) |

INDEPENDENT VARIABLE: SEX OF THE CHILD

Dependent variables Results

| | |
|--|---|
| 59. teacher praise/positive reinforcement | more to F--Fagot (1973, 1978), Gunnarsson (1978) no difference--Fagot (1975, 1977c) different conditions for M and F--Fagot (1977a, 1977b, 1978, 1979) |
| 60. teacher initiated contact | more for girls--Fagot (1973) no difference--Fagot (1977c) |
| 61. teacher criticism | no difference--Fagot (1973, 1975, 1977c) |
| 62. teacher questions | more asked of F--Fagot (1977b) |
| 63. reinforcement of M/F behavior by teacher | M reinforced for M behavior--Fagot (1977a, 1977b, 1978, 1979) F reinforced for F behavior--Etaugh et al. (1975), Fagot (1977b, 1978) M reinforced for opposite sex behavior--Etaugh et al. (1975), Fagot (1975, 1977a, 1977b, 1978) M criticized for opposite sex behavior--Fagot (1977a) F criticized for opposite sex behavior--Fagot (1977a, 1979) |
| 64. teacher responsiveness | responded more to F questions--Fagot (1973) equal in overall responsiveness--Fagot (1975) |
| 65. verbal interaction with teacher | varying results in adult presence--Cooper (1979) significant differences in favor of M, more direction to boys and more response to girls--Cherry |

INDEPENDENT VARIABLE: SEX OF THE CHILD

Dependent variables Results

| | |
|--|---|
| 65. verbal interaction with teacher cont'd | (1975) no difference--Berk (1973) |
| 66. adult dependency | higher in F--Seegmiller (1977), Travers et al. (1977) |
| 67. initiation of teacher contacts | no difference--Feldbaum et al. (1980) |
| 68. receive teacher attention | no difference--Fagot (1975, 1977b, 1977c, 1978) |
| 69. adult/child interaction | results dependent upon setting--Gunnarsson (1978) |

INDEPENDENT VARIABLE: AGE OF THE CHILD

Dependent variables

Results

| | |
|--|---|
| 1. indoor/outdoor play | no differences--Harper et al. (1975) younger preferred inside--Tizard et al. (1976) |
| 2. parallel play | no reliable age effects--Field (1980) correlated negatively (-.35)--Johnson et al. (1980) |
| 3. solitary play | no reliable age effects--Field (1980) correlated negatively (-.19)--Johnson et al. (1980) more for younger children--Tizard et al. (1976) |
| 4. associative play 5. cooperative play | no reliable age effects--Field (1980) |
| 6. child social interactions | older children more verbal responses, younger children more nonverbal--Berk (1973) amount of interaction with same/opposite sex differed for older but not younger children--Eisenberg-berg et al (1979a) no reliable age effects--Field (1980) more for older than younger children--Finkelstein et al. (1978), Berk (1973), Reuter et al. (1973) conflict among 2 and 3 year olds--Kerschner (1977) accounted for little or none of the variance in social interactions--Brown et al. (1979) no differences--Murphy et al. (1976) |

INDEPENDENT VARIABLE: AGE OF THE CHILD

Dependent variables

Results

| | |
|-----------------------------|---|
| 7. initiations received | older children received more than younger children--Berk (1973) no reliable age effects--Field (1980) |
| 8. prosocial behavior | no differences between age groups--Eisenberg-berg et al. (1977) sharing increased with age but helping/comforting did not--Eisenberg-berg et al. (1979c) |
| 9. sharing/defending | older girls, not older boys defended more than same sex younger children--Eisenberg-berg et al. (1979b) |
| 10. vocalization to peers | used more by older children--Finkelstein et al. (1978), Tizard et al. (1976) no reliable age effects--Field (1980) |
| 11. child initiations | no reliable age effects--Field (1980) older children used more coercive methods--Berk (1973) |
| 12. mode of privacy seeking | no significant differences--Jacobs (1977) |
| 13. activities of children | none totally age dependent--Karlson et al. (1973) pattern differences exist--Berk (1973) |

INDEPENDENT VARIABLE: AGE OF THE CHILD

Dependent variables Results

| | |
|--|---|
| 14. activity level | no significant relationships-- Toner <u>et al.</u> (1977) |
| 15. Stanford Binet | gains by younger children in first year of preschool attendance-- Karlson <u>et al.</u> (1973) |
| 16. role taking | higher for older children--Castle <u>et al.</u> (1979) |
| 17. task persistence | for young F, combinations of teacher proximity, prompting and reinforcement increase task persistence--Krantz <u>et al.</u> (1979) |
| 18. Piagetian testing 19. motor testing | older children performed better-- Larsen (1975) |
| 20. resistance to temptation | increased with age on one task-- Toner <u>et al.</u> (1977) |
| 21. group glee | no difference--Sherman (1975) |
| 22. teacher led instruction | no age difference--Huston Stein (1977) |
| 23. verbal interaction with teacher | older children used more coercive methods--Berk (1973) older children talked more to teacher than to peers--Kerschner (1977) |

INDEPENDENT VARIABLE: AGE OF THE CHILD

Dependent variables Results

| | |
|---|---|
| 23. verbal interaction with teacher cont'd | older children sent more communi- cations to teachers--Berk (1973), Tizard <u>et al.</u> (1976) adult talked more to older child- ren--Cooper (1979) no reliable age effects--Field (1980) differences dependent upon sett- ings--Tyler <u>et al.</u> (1980) |
| 24. verbal behavior | decrease in conversation in teacher presence for all but younger boys-- Cooper (1979) older girls high in confirming-- Cooper (1979) older boys talk more when teacher is absent--Cooper (1979) more inquiring by older girls-- Cooper (1979) older children accompany threats with words--Cooper (1979) older children inform younger in adult absence, but in adult pre- sence, only older girls do so-- Cooper (1979) for older more verbal children, suggesting increases in adult presence--Cooper (1979) |
| 25. adult/child interactions | older children received more-- Berk (1973) no reliable age effects--Field (1980) younger children were involved in more social teacher/child inter- action--Tyler <u>et al.</u> (1980), Reuter <u>et al.</u> (1973), Finkelstein <u>et al.</u> (1978) younger children more compliant in multigenerational daycare-- Kerschner (1977) older and younger children com- pliant in traditional daycare-- Kerschner (1977) |

| INDEPENDENT VARIABLES: SOCIAL COMPETENCY/DEVELOPMENTAL LEVEL | |
|--|---|
| Dependent variables | Results |
| 1. active social interactions | little or none of the variance accounted for by child characteristics--Brown et al. (1979) 41% of the variance accounted for by social status of the child and developmental level--Connolly et al. (1978) |

| INDEPENDENT VARIABLES: TYPE OF HANDICAP | |
|---|--|
| NUMBER OF DAYS IN THE CLASSROOM | |
| PRESCHOOL EXPERIENCE | |
| NUMBER OF SIBLINGS | |
| BIRTH ORDER | |
| Dependent variables | Results |
| 1. active social interactions | little or none of the variance accounted for by the child characteristics--Brown et al. (1979) |

INDEPENDENT VARIABLE: STABLE/REFERRED CHILD

| Dependent variables | Results |
|------------------------|---|
| 1. choice of classmate | social interaction in choices between stable and referred children--Carter (1977) |

INDEPENDENT VARIABLE: AT RISK/NORMAL CHILD

| Dependent variables | Results |
|-------------------------------|---|
| 1. parallel play | normals interacted significantly more with each other than with at risk children; at risk children interacted more with at risk children--Cavallaro et al. (1980) |
| 2. mutual object manipulation | no differences re: preferences--Cavallaro et al. (1980) |
| 3. gazes received | no differences in gazes received from at risk or normal children for normal children; at risk children received more gazes from other at risk children--Cavallaro et al. (1980) |
| 4. gaze behavior | normal children gave more proximal and total gazes to other normals; at risk children gave more proximal and total gazes to other at risk children--Cavallaro et al. (1980) |
| 5. teacher ratings | highly correlated with on task behavior (on task behavior being more characteristic of normal than at risk children)--Forness et al. (1977) |

INDEPENDENT VARIABLE: ABUSED/NONABUSED CHILD

| Dependent variables | Results |
|--|--|
| 1. approaches to peer | no differences--George <u>et al.</u> (1979) |
| 2. avoidance of peer | four times as likely by abused children--George <u>et al.</u> (1979) |
| 3. aggression to peer | twice as often by abused children--George <u>et al.</u> (1979) |
| 4. approach/avoidance behavior to friendly overtured | none of nonabused used this behavior, but all of abused did--George <u>et al.</u> (1979) |
| 5. approaches by caregiver or peer | no differences in rate--George <u>et al.</u> (1979) |
| 6. approaches to caregiver | abused children approached only half as often--George <u>et al.</u> (1979) |
| 7. friendly caregiver approach | abused children more likely to use indirect approach--George <u>et al.</u> (1979) |
| 8. avoidance of caregiver | three times as likely by abused children--George <u>et al.</u> (1979) |
| 9. aggression to caregiver | four times as likely by abused --George <u>et al.</u> (1979) |

INDEPENDENT VARIABLE: ISOLATE/NONISOLATE CHILD

| Dependent variables | Results |
|---|---|
| 1. unoccupied 2. onlooker 3. solitary spacing | higher in isolates--Scarlett (1980) |
| 4. peer oriented behavior 5. associative play 6. integrative play 7. imaginative/dramatic play | less in isolates--Scarlett (1980) |
| 8. independent/parallel play | no differences--Scarlett (1980) |
| 9. proximity to peers | more time spent for both isolates and nonisolates in this behavior--Scarlett (1980) |
| 10. social interactions | behavior of isolates changed through peer reinforcement--Wishon <u>et al.</u> (1979) increased in small group for isolates--Scarlett (1980) |
| 11. proximity to adults | less time spent in this behavior for both isolates and nonisolates --Scarlett (1980) |

| INDEPENDENT VARIABLE: APATHY/WITHDRAWAL VS ANGER/DEFIANCE IN CHILDREN | | |
|--|---|--|
| Dependent variables | Results | |
| 1. peer interaction | high apathy/withdrawal related to low peer interaction and initiations; high anger/defiant related to high percent of peer interactions--Kohn et al. (1974) | |
| 2. solitary behavior | higher in apathy/withdrawal child--Kohn et al. (1974) | |
| 3. negative/hostile behavior | higher in anger/defiant child--Kohn et al. (1974) | |
| 4. target of hostile behavior | anger/defiant child defends more than apathy/withdrawal child--Kohn et al. (1974) | |

| INDEPENDENT VARIABLE: HANDICAPPED (HC)/NONHANDICAPPED (NHC) CHILD | | |
|---|---|--|
| Dependent variables | Results | |
| 1. constructive play | NHC engaged in more--Guralnick (1978) severely HC(S) and moderately HC (Mo) played more constructively in a mixed condition while NHC and mildly HC (Mi) did so in unmixed condition--Guralnick (1978) | |
| 2. associative play | less advanced children engaged in more than NHC--Guralnick (1978) increased over time when HC integrated with NHC--Plummer (1977) | |
| 3. onlooker | less advanced children engaged in less than NHC--Guralnick (1978) | |
| 4. solitary play | less advanced children engaged in more than NHC--Guralnick (1978) | |
| 5. cooperative play | less advanced children engaged in less than NHC--Guralnick (1978) | |
| 6. unoccupied | fewer incidents over time when HC integrated with NHC--Plummer (1977) HC engaged in more than NHC--Guralnick (1978) | |
| 7. parallel play | NHC and Mi less parallel play with S and more with Mo--Guralnick (1978) dominant mode of play for all children--Guralnick (1978) | |

INDEPENDENT VARIABLE: HANDICAPPED (HC)/NONHANDICAPPED (NHC) CHILD

| Dependent variables | Results |
|---|--|
| 7. parallel play cont'd | when interacting with NHC, HC use parallel play, appropriate integrative play and sharing of information--Montemurro (1980) when interacting with HC, HC use parallel play, appropriate integrative play, but differ in amount of directing--Montemurro (1980) increased over time for HC when integrated with NHC--Plummer (1977) |
| 8. sharing of information 9. integrative play 10. directing | when interacting with NHC, HC use parallel play, appropriate integrative play and appropriate sharing of information--Montemurro (1980) when interacting with HC, HC use parallel play, appropriate integrative play, but differ in amount of directing--Montemurro (1980) |
| 11. disruptive behavior | more in regular class than special class by HC--Pastor <u>et al.</u> (1978) |
| 12. vocalization to peers | tendency away from shaking head or nodding to one word answers or phrases for HC--Plummer (1977) NHC more than HC--Field (1979) |
| 13. coping styles | more similarities than differences --Edwards <u>et al.</u> (1979) |
| 14. nondirected looking 15. smiling 16. vocalizing 17. movement 18. touching self | more in S and Mo groups--Field (1979) |

INDEPENDENT VARIABLE: HANDICAPPED (HC)/NONHANDICAPPED (NHC) CHILD

| Dependent variables | Results |
|--|--|
| 19. sharing toy | more in NHC than HC--Field (1979) |
| 20. looking at/manipulating toys | more in Mi and NHC--Field (1979) |
| 21. looking at peers | NHC>Mi and Mo>S--Field (1979) |
| 22. proximity to peers | NHC>Mi>Mo and S--Field (1979) |
| 23. child/child interaction | teacher structured free play>no teacher involvement>active teacher involvement in producing more child/child interaction in HC children--Shores <u>et al.</u> (1976) |
| 24. social interactions | NHC and Mi communicated to and received more communications from each other than expected according to availability; NHC and Mi communicated less with Mo and S--Guralnick (1978) S and Mo communicated to each group as expected per the criterion of availability--Guralnick (1978) levels of social participation increased over time for HC when integrated with NHC--Plummer (1977) |
| 25. teacher prompts/positive reinforcement | more to less advanced but absolute differences small-Guralnick (1978) |
| 26. teacher attitudes | positive toward integration of HC--Plummer (1977) |

INDEPENDENT VARIABLE: HANDICAPPED (HC)/NONHANDICAPPED (NHC) CHILD

| Dependent variables | Results |
|---------------------------------|--|
| 27. adult dependent | predominant mode of behavior for NHC and HC--Edwards et al. (1979) |
| 28. response to adult direction | tendency for nonresponse by HC declined over time--Plummer (1977) |
| 29. vocalization to teacher | NHC more than HC--Field (1979) |

INDEPENDENT VARIABLE: SOCIOECONOMIC STATUS (SES) OF THE CHILD

| Dependent variables | Results |
|---|--|
| 1. dramatic play | more frequent in heterogeneous SES class--Beller (1974) |
| 2. symbolic play | lower frequency in working class children--Tizard et al. (1976) |
| 3. partial use of play materials | higher in working class children --Tizard et al. (1976) |
| 4. preference for transportation toys | higher for working class children --Tizard et al. (1976) |
| 5. indoor/outdoor play | outdoor preferred by working class children--Tizard et al. (1976) |
| 6. level of social play | no differences between classes-- |
| 7. complexity/length of games | Tizard et al. (1976) |
| 8. themes in symbolic play | |
| 9. frequency of dramatic impersonations | |
| 10. original combination of materials | |
| 11. appropriate use of play materials | |
| 12. solitary or parallel play | |
| 13. noncoordinated activities | more time spent by lower class--Berk (1973) more time in simultaneously or reciprocally coordinated activities by middle class--Berk (1973) |
| 14. child initiated activities | more time spent in by middle class --Berk (1973) |

INDEPENDENT VARIABLE: SOCIOECONOMIC STATUS (SES) OF THE CHILD

Dependent variables

Results

| | |
|--------------------------------------|---|
| 15. activities of children | middle class more time in book related activities, animal and plant care, transition, waiting, watching, listening, wandering, exploring, and manipulating; lower class more time in eating and readying--Berk (1973) |
| 16. child social interactions | middle class children sought more help from other children than lower class children--Berk (1973) |
| 17. language comprehension | lower in working class children--Tizard et al. (1976) |
| 18. contacts received | more for middle class females than lower class females or middle and lower class males--Appleford et al. (1976) |
| 19. behavior in middle class schools | differences between SES children less pronounced--Tizard et al. (1976) |
| 20. group vs class participation | lower class--more time in total class arrangement; middle class more time in cluster, dyad or single child arrangement--Berk (1973) |
| 21. WPPSI | change in score not associated with SES--Karlson et al. (1973) |

INDEPENDENT VARIABLE: SOCIOECONOMIC STATUS (SES) OF THE CHILD

Dependent variables

Results

| | |
|-------------------------------------|--|
| 22. Merrill-Palmer | significant gains for Head Start children but not middle class--Karlson et al. (1973) |
| 23. Stanford Binet | social class effect not present--Karlson et al. (1973) |
| 24. teacher social contacts | more to middle income children--Appleford et al. (1976) |
| 25. teacher instructional contacts | no difference--Kennedy (1976) more single units to lower class--Berk (1973) more to middle income children--Appleford et al. (1976) |
| 26. discipline and control contacts | more to low income children--Appleford et al. (1976) |
| 27. teacher ratings | no relationship to social class--Kennedy (1976) |
| 28. teacher responses | greater proportion of verbal to middle class and nonverbal to lower class--Berk (1973) |
| 29. teacher direction/leadership | middle class spent more time in activities in which the teacher was not involved; lower class spent more time in activities in which the teacher was an active leader--Berk (1973) |

INDEPENDENT VARIABLE: SOCIOECONOMIC STATUS (SES) OF THE CHILD

| Dependent variables | Results |
|--|-------------------------------------|
| 30. amount of talk to staff/ children | no difference--Tizard et al. (1976) |
| 31. coerciveness or verbalness of methods in teacher/child contacts made by children | no difference--Berk (1973) |

INDEPENDENT VARIABLE: NEW/TENURED STUDENT

| Dependent variables | Results |
|---|---|
| 1. off task 2. spatially isolated 3. non-synchronous on task | more likely in new children-- Feldbaum et al. (1980) |
| 4. cooperative play 5. parallel play (synchronized) 6. talk to other children | more likely in tenured children-- Feldbaum et al. (1980) |
| 7. initiate teacher inter- actions | more likely in tenured children-- Feldbaum et al. (1980) |

INDEPENDENT VARIABLE: HIGH/LOW SOCIAL INTERACTION

| Dependent variables | Results |
|------------------------------|--|
| 1. mutual behavior | high rate children engage in more--Tremblay et al. (1980) |
| 2. solitary behavior | low rate children engage in more--Tremblay et al. (1980) |
| 3. parallel behavior | low rate children engage in more (approaching significance) --Tremblay et al. (1980) |
| 4. fantasy behavior | high rate children engage in more--Tremblay et al. (1980) |
| 5. game behavior | no differences--Tremblay et al. (1980) |
| 6. role taking | high rate children scored higher--Castle et al. (1979) |
| 7. communicative egocentrism | does not appear to be affected by peer interaction--Castle et al. (1979) |

INDEPENDENT VARIABLE: HIGH/LOW INTRINSIC INTEREST IN CHILDREN

| Dependent variables | Results |
|---|---|
| 1. duration, quality and number of drawings | for high children, an expected reward led to less interest on first trial and on second interest was renewed; with no reward, child's interest level was maintained--Loveland et al. (1977) for children low on intrinsic interest, an expected reward increased interest but interest was not maintained--Loveland et al. (1977) |

INDEPENDENT VARIABLE: ETHNICITY OF CHILD

| Dependent variables | Results |
|---------------------|---|
| 1. task persistence | children in low structured classes more task persistent due to ethnic differences--Huston-Stein et al. (1977) |

INDEPENDENT VARIABLE: RACE OF THE CHILD

| Dependent variables | Results |
|---------------------|--|
| 1. task persistence | whites higher than non-whites in March--Forness et al. (1975) |
| 2. IQ | related to self concept and aggression in black children--Mathis et al. (1976) |
| 3. latency time | high latency time, high leaving the field for black children--Mathis et al. (1976) |

INDEPENDENT VARIABLE: CHILD AWARENESS OF CLASSROOM STRUCTURE

| Dependent variables | Results |
|----------------------------------|--|
| 1. behavior maintaining contexts | children aware and can communicate cues requiring appropriate behaviors for maintenance of social contexts--Wallett et al. (1979) |
| 2. play vs work | children considered play as voluntary and under their control while teacher also considered fun and creative activities as play--King (1979) |
| 3. interactional competency | children showed interactional competency in environments over which they exercise control--Black (1980) |

INDEPENDENT VARIABLE: PEER REINFORCEMENT

| Dependent variables | Results |
|------------------------|---|
| 1. social interactions | increased for isolate children--Wishon et al. (1979) |
| 2. cooperative play | increased when combined with peer reporting of friendly behavior--Grieger et al. (1976) |
| 3. aggression | decreased when combined with peer reporting of friendly behavior--Grieger et al. (1976) |

| INDEPENDENT VARIABLE: SOCIOMETRIC STATUS | |
|--|--|
| Dependent variables | Results |
| 1. helping behavior | high status children received more than they gave; low status children gave more than they received--Marcus (1977) |
| 2. hovering behavior | low peer interactors and sociometric rejects sociometrically neglected (tuned out and disruptive) children--Gottman (1977) |
| 3. peer acceptance | tuned out child less accepted than child who was disruptive to teacher--Gottman (1977) |

| INDEPENDENT VARIABLE: GROUP GLEE | |
|----------------------------------|--|
| Dependent variables | Results |
| 1. teacher response | when glee was disruptive, longer than 10 seconds, and was precipitated by satiation, teacher most likely to suppress; when glee was nondisruptive, less than 10 seconds and involved laughing, screaming and intense physical involvement, teacher was most likely to ignore--Sherman (1975) |

INDEPENDENT VARIABLE: ATTACHMENT TO TEACHER

| Dependent variables | Results |
|---------------------|--|
| 1. mode | vocal > gestural > physical -- Houston (1978) |

INDEPENDENT VARIABLE: ROLE TAKING

| Dependent variables | Results |
|----------------------|--|
| 1. social competence | highly correlated--Jakob et al. (1976) |
| 2. emphatic behavior | empathy given correlated highly with effective role taking; empathy received correlated with perceptual role taking and dona- tions--Strayer et al. (1978) |

INDEPENDENT VARIABLE: CHILD SOCIAL INITIATIONS

| Dependent variables | Results |
|-----------------------|---|
| 1. status of child | low status children in all groups were target of half the agonistic interaction--Strayer et al. (1975) |
| 2. response of child | no response given to over half the initiated initiations--Strayer et al. (1977) low response of seeking help to agonistic behavior; submission, object loss, no response were each used about 25% of the time--Strayer et al. (1975) |
| 3. strategies used | nonverbal entry, producing a variant of the behavior, claiming object or area and disruptive entry used about 80% of the time--Corsaro (1978) |
| 4. positive behavior | followed positive initiations on the part of the recipient--Strain et al. (1979) |
| 5. negative behavior | followed negative initiations on the part of the recipient--Strain et al. (1979) |
| 6. attention of adult | child repeated topic introduction to sociodramatic play to get adult attention--Pellegrini (1980) |

INDEPENDENT VARIABLE: SEX OF THE TEACHER

| Dependent variables | Results |
|--|--|
| 1. reinforcement of M/F behavior in children | both M and F teachers equally rewarded feminine behaviors--Etaugh et al. (1975) M teachers dispensed more rewards for M behaviors than did F teacher--Etaugh et al. (1975) M and F teachers responded more to feminine behaviors regardless of sex of the child--Fagot (1977b), Robinson (1977) |
| 2. teacher praise | M and F teachers use more reinforcement for F behaviors and punishment for M behaviors--Robinson (1977) M teachers gave more favorable comments, more affection and joined in children's play more often than F teachers--Fagot (1977b) |
| 3. touching behaviors | M teachers touched M children more than F teachers, F teachers touched F children more than M teachers--Perdue et al. (1978) M teachers were more likely to give a helpful touch to F than M children and a friendly touch to M than to F children--Perdue et al. (1978) no differences in type of touching for F teachers--Perdue et al. (1978) M children touched M teachers more than they did F teachers--Perdue et al. (1978) no differences in the rate of touching F teacher--Perdue et al. (1978) both F and M children touched M teacher in a friendly rather than incidental nature--Perdue et al. (1978) |

INDEPENDENT VARIABLE: SEX OF THE TEACHER

| Dependent variables | Results |
|-----------------------|--|
| 4. touching behaviors | for F teachers, both M and F children were equally friendly or incidental in touching behavior--Perdue <u>et al.</u> (1978) no differences in rate of touching children of either sex by F teachers--Serbin <u>et al.</u> (1973) |

INDEPENDENT VARIABLE: TEACHER EXPERIENCE

| Dependent variables | Results |
|-----------------------------------|--|
| 1. active social interactions | teacher experience, attitude, and training accounted for 19% of the variance--Brown <u>et al.</u> (1979) |
| 2. teacher direction | higher in experienced teachers--Fagot (1977b) |
| 3. more questions | |
| 4. more informative | |
| 5. helped children learn more | |
| 6. favorable comment | higher in experienced teachers--Fagot (1977b) more given to girls by experienced teachers--Fagot (1975) |
| 7. rate of interaction | lower in experienced teachers--Fagot (1975, 1977b) |
| 8. joined children's play | higher in inexperienced teachers--Fagot (1975, 1977b) both experienced and inexperienced joined play of M children more than F children--Fagot (1975) |
| 9. responsiveness to M/F children | experienced teachers responded more to F--Fagot (1977b) |
| 10. response to M/F behavior | experienced responded more often to F behavior regardless of sex of child; inexperienced responded to M for M children and F for F children--Fagot (1975, 1977b) |

INDEPENDENT VARIABLE: TEACHER EXPERIENCE

Dependent variables

Results

| | |
|----------------------------|--|
| 11. activities of children | experienced reacted more often to art and fine motor; inexperienced reacted equally to all activities--Fagot (1977b) |
| 12. initiation of behavior | higher in experienced teachers--Fagot (1975) |

INDEPENDENT VARIABLE: TEACHER/TEACHER ASSISTANT

Dependent variables

Results

| | |
|------------------------------------|---|
| 1. indirectness | teachers used more than assistants --Townsend et al. (1975) |
| 2. teacher talk | more for teacher assistants--Townsend et al. (1975) |
| 3. % of student response | teachers allowed more--Townsend et al. (1975) |
| 4. language used | assistants more likely to change languages during lesson presentation--Townsend et al. (1975) |
| 5. nonverbal behavior | assistants used more negative nonverbal behavior, teachers more positive nonverbal behavior--Townsend et al. (1975) |
| 6. behaviors used in each language | no differences--Townsend et al. (1975) |

INDEPENDENT VARIABLE: EFFECTIVE/INEFFECTIVE TEACHER

| Dependent variables | Results |
|----------------------------------|--|
| 1. longer episodes | more likely in effective teachers-- Scott (1977) |
| 2. participation level | |
| 3. self-direction | higher in effective teachers-- Scott (1977) |
| 3. use of two or more mechanisms | |
| 5. large group activity behavior | more episodes concerning group by effective teachers, but more episodes concerning individuals by ineffective teachers--Scott (1977) |

INDEPENDENT VARIABLES: FILMS, MATERIALS, TEACHER TRAINING

| Dependent variables | Results |
|-------------------------------|--|
| 1. prosocial behavior | relevant films, materials and teacher training > films and play materials > films > neutral-- Friedrich-Cofer et al. (1979) |
| 2. active social interactions | experience, attitude and training accounted for 19% of the variance--Brown et al. (1979) |
| 3. program implementation | teacher training > no teacher training--Stachel (1980) |

INDEPENDENT VARIABLE: TEACHER FEEDBACK

| Dependent variable | Results |
|----------------------------|--|
| 1. mathematics achievement | feedback re: correctness of response negatively correlated to achievement--Becher (1978) |

INDEPENDENT VARIABLE: TEACHER PRAISE/REINFORCEMENT

| Dependent variables | Results |
|-------------------------------|---|
| 1. attending | increased--Geller et al. (1975) |
| 2. learning | increased--Geller et al. (1975) |
| 3. task persistence | higher on task scores--Hamilton et al. (1978) increased, but also combinations of praise proximity, and reinforcement increased task persistence--Krantz et al. (1979) |
| 4. child social interaction | increased--Holmberg et al. (1972) marginal effects--Strain et al. (1979) |
| 5. student participation | increased--Reitz (1979) |
| 6. cross sex cooperative play | increased--Serbin et al. (1977) |
| 7. cleanliness behavior | increased--Taylor et al. (1978) |
| 8. prosocial behavior | increased--Musterbarth et al. (1977) |

INDEPENDENT VARIABLE: TEACHER CRITICISM

| Dependent variable | Results |
|---------------------|---|
| 1. task persistence | lower in class on task scores and lower experimental on task scores--Hamilton et al. (1978) |

INDEPENDENT VARIABLE: TEACHER PRIMES

| Dependent variables | Results |
|------------------------------------|--|
| 1. developmental level of children | more to less advanced children but absolute differences small--Guralnick (1978) |
| 2. motor behavior | primes most effective in increasing motor behavior--Hardiman et al. (1975) |
| 3. task persistence | proximity, reinforcement and prompting > proximity and prompting > proximity and reinforcement > proximity > no intervention--Krantz et al. (1979) |
| 4. child/child verbalization | higher when teacher verbalization reduced and when reduced teacher verbalization was combined with teacher primes--Rintoul (1975) |
| 5. child to teacher verbalization | decreased when teacher verbalization reduced and when teacher verbalizations combined with teacher primes--Rintoul (1975) |
| 6. child social interaction | increased--Holmberg et al. (1972), Keogh et al. (1973), Peck et al. (1978a), Wishon et al. (1979) marginal effects--Strain et al. (1979) |

INDEPENDENT VARIABLE: TEACHER ATTENDING TO COOPERATIVE/AGGRESSIVE
VERBALIZATIONS

| Dependent variables | Results |
|-------------------------|--|
| 1. cooperative behavior | increased for attending to cooperative verbalizations; decreased for attending to aggressive verbalizations--Slaby et al. (1977) |
| 2. aggression | decreased for attending to cooperative verbalizations; no change for attention to aggression--Slaby et al. (1977) |

INDEPENDENT VARIABLE: TEACHER ATTENTION

| Dependent variables | Results |
|---------------------|--|
| 1. motor behavior | increased but primes were most effective--Hardiman et al. (1975) |
| 2. task completion | increased--Yawkey et al. (1974) |

INDEPENDENT VARIABLE: PROVISION/NONPROVISION OF REWARD

Dependent variables

Results

1. duration, quality and number of drawings
for children on high intrinsic interest, an expected reward led to less interest on first trial and on second trial, interest was renewed; with no reward, child's interest level was maintained-- Loveland et al. (1977) for children low on intrinsic interest, an expected reward increased interest but interest was not maintained-- Loveland et al. (1977)

2. participation in group
3. talking to adult/peers

increased with reward and maintained over no consequences condition--Sacks et al. (1975)

INDEPENDENT VARIABLES: TASK DIFFICULTY/REWARD

Dependent variable

Results

1. task completion
when hard task rewarded, easy tasks done well but remaining unrewarded hard task not done as well as first--Bucher et al. (1977)
when easy task rewarded, both hard tasks performed at a lower rate--Bucher et al. (1977)

INDEPENDENT VARIABLE: TEACHER PROXIMITY

| Dependent variable | Results |
|---------------------|--|
| 1. task persistence | effective with young F preschoolers --Krantz et al. (1979) most effective when combined with verbal reinforcement and prompting --Krantz et al. (1979) |

INDEPENDENT VARIABLE: TEACHER STRUCTURED ACTIVITY

| Dependent variables | Results |
|--|--|
| 1. imaginative play | more in lower structure--Huston- Stein et al. (1977) |
| 2. fantasy activity | more in lower structure--Connolly et al. (1978) more in free play and less in teacher structured over time-- Emmerich (1977) |
| 3. participation by children | more for M in low structure, more for F in high structure--Carpenter (1979) more for M in high structure-- Carpenter et al. (1978) |
| 4. novel use of materials | generally low use but low structure medium structure > high structure-- Carpenter (1979) |
| 5. compliance | higher in high structure--Carpenter (1979), Carpenter et al. (1978), Huston-Stein et al. (1977) more in free play than teacher structured--Emmerich (1977) |
| 6. cooperation with peers 7. affiliation with peers | more in free play than teacher structured--Emmerich (1977) |
| 8. autonomous achievement 9. gross motor activity | increased over time in free play decreased in teacher structured activity--Emmerich (1977) |
| 10. cognitive activity | more over time in teacher struc- tured but not in free play-- Emmerich (1977) |

INDEPENDENT VARIABLE: TEACHER STRUCTURED ACTIVITY

Dependent variables Results

| | |
|---|--|
| 11. social interaction | more in low structure--Connolly et al. (1978) teacher structured free play> no teacher involvement> active teacher involvement--Shores et al. (1976) |
| 12. aggression | more in low structure classes-- Huston-Stein et al. (1977) |
| 13. attention span | increase in children in high structure--Connolly et al. (1978) |
| 14. task persistence | more in low structure classes-- Huston-Stein et al. (1977) independent seatwork> whole class recitation and continuous central signal emission--Morrison et al. (1978) |
| 15. mathematics achievement | indirect teaching more effective than direct in increasing achieve- ment--Becher (1978) |
| 16. verbal interaction with teacher | more in lower structure--Connolly et al. (1978) |
| 17. spontaneous social inter- action with adults | no difference--Huston-Stein et al. (1977) |
| 18. teacher child interaction | active teacher involvement> no teacher involvement or teacher structured free play-- Shores et al. (1977) |

INDEPENDENT VARIABLE: TEACHER STRUCTURED ACTIVITY

Dependent variables Results

| | |
|-------------------------------------|---|
| 19. teacher controlling behavior | higher in group activity than free play--Perry (undated) |
|-------------------------------------|---|

| INDEPENDENT VARIABLE: ADULT INTERACTION IN SOCIODRAMATIC PLAY | | |
|---|---|--|
| Dependent variables | Results | |
| 1. complexity of play | increased with adult involvement--Loving (1974) | |
| 2. ITPA | significant increase for M--Loving (1974) | |
| 3. language | more words emitted--Loving (1974) | |

| INDEPENDENT VARIABLE: PLAY/SKILLS TUTORING | | |
|--|--|--|
| Dependent variables | Results | |
| 1. test scores | all improved--Smith <u>et al.</u> (1978a, 1978b) | |
| 2. fantasy activity | higher in play tutoring--Smith | |
| 3. group activity in free play | <u>et al.</u> (1978a, 1978b) | |
| 4. role taking | | |

| INDEPENDENT VARIABLE: VERBAL INSTRUCTIONS | | INDEPENDENT VARIABLE: TRAINING | |
|---|---|--------------------------------|-----------------------------------|
| Dependent variables | | Dependent variable | Results |
| 1. sharing/defending | sharing increased with age for instructions and decreased with age for no instructions--Eisenberg-berg et al. (1979b) | 1. skill level | increased--Hardiman et al. (1975) |
| 2. aggressive behavior | aggressive children decreased with instructions--Zahavi et al. (1978) | | |
| 3. positive active behavior | aggressive children increased with instructions--Zahavi et al. (1978) | | |
| 4. inactive behavior | no difference--Zahavi et al. (1978) | | |

INDEPENDENT VARIABLE: MODELLING

Dependent variable

Results

| | |
|---------------------------------|---|
| 1. reading behavior of children | more frequent than with the use of new books--Haskett et al. (1975) |
|---------------------------------|---|

INDEPENDENT VARIABLE: TEACHER PRESENCE

Dependent variables

Results

| | |
|-------------------------------|--|
| 1. during children's activity | more frequently by special class teachers than regular class teachers--Pastor et al. (1978) |
| 2. area use | more use of an area when a passive adult present but little carry-over effect; more use of an area when interactive adult present with carry over effect--Johnson et al. (1979) |
| 3. task persistence | increases with adult presence, and also with various combinations of proximity, prompting and reinforcement--Krantz et al. (1979) |
| 4. attention span | greater in presence of an adult; play groups > nursery school > nursery class-Tyler et al. (1979) |
| 5. verbal behavior | conversation decreased in teacher presence except in young M--Cooper (1979) older M talk more when teacher absent--Cooper (1979) older children inform younger, but only F continue to do so in teacher presence--Cooper (1979) for older more verbal children, suggesting increases in teacher presence--Cooper (1979) |

INDEPENDENT VARIABLE: TEACHER QUESTIONS

| Dependent variables | Results |
|---|--|
| 1. Shafte] Photo Problems 2. Similarities Test | performance increased after high level questions and decreased after low level questions-- Turner et al. (1975) |

INDEPENDENT VARIABLE: TEACHER CONTACTS

| Dependent variables | Results |
|--------------------------|---|
| 1. receivers of contacts | one child received 1/2 of interactive contacts; 4 children received over 1/2 of dominative contacts involving conflict; one child received almost 1/3 of dominative contacts involving conflict--Kennedy (1976) |
| 2. ignoring | positive contacts by adults consistently ignored; negative contacts by adults ignored but accompanied by negative behavior-- Strain et al. (1979) |

| INDEPENDENT VARIABLE: TEACHER VERBALIZATION | | INDEPENDENT VARIABLE: TEACHER SELF-RECORDING | |
|---|--|---|-----------------------------------|
| Dependent variables | Results | Dependent variables | Results |
| 1. child/child verbalization | higher when teacher verbalization reduced and when reduced teacher verbalization was combined with teacher primes--Rintoul (1975) | 1. teacher rate of primes 2. teacher reinforcement | increased--Holmberg et al. (1972) |
| 2. child to adult verbalization | decreased when teacher verbalization reduced and when reduced teacher verbalization was combined with teacher primes--Rintoul (1975) | | |

INDEPENDENT VARIABLE: CLASSROOM ORGANIZATION AND SPACE

| Dependent variables | Results |
|--|---|
| 1. fantasy interactions 2. verbal interactions 3. dyadic interactions 4. interactions 5. parallel play 6. associative play 7. cooperative play | A(12:1 ratio; partitioned)>B(12:1 open) and C(4:1, partitioned)>D(4:1, open)--Field (1980) |
| 8. solitary play 9. positive play 10. child disruption of interaction | no differences--Field (1980) |
| 11. onlooker/unoccupied | D(4:1, open)>B(12:1, open) and C(4:1 partitioned)>A(12:1, partitioned)--Field (1980) |
| 12. social play level | number of barriers, number of complex play units, and number of children present accounted for 23% of the variance--Brown et al. (1979) |
| 13. physical activity | less physical activity in smaller spaces--Connolly et al. (1978) |
| 14. teacher play in space during interaction 15. teacher disruption of interaction | D(4:1, open)>B(12:1, open) and C(3:1, partitioned)>A(12:1, partitioned)--Field (1980) |
| 16. teacher interaction | D(4:1, open)>B(12:1, open) and C(4:1, partitioned)>A(12:1, partitioned)--Field (1980) |

INDEPENDENT VARIABLE: AREA/SETTING

| Dependent variables | Results |
|---------------------------------|---|
| 1. rates of social behavior | lower in sand, water play, books and records, other, science, routines--Beehler (1974) higher in transportation toys, role play, climbing/running/tumbling, blocks--Beehler (1974) |
| 2. use of least structured area | M used for make believe, F used for exploratory--Brenner (1976) |
| 3. make believe | household area elicits almost twice as much as any other area--Brenner (1976) |
| 4. social interactions | no difference re: area--Brenner (1976) highest in block area--Tyler (1975) overall, did not vary from center to center--Patterson (1976) |
| 5. assertive interactions | art-6%, blocks-28%, dramatic play-22%--Patterson (1976) |

| INDEPENDENT VARIABLE: NOVEL MATERIALS | | |
|---------------------------------------|---|--|
| Dependent variables | Results | |
| 1. imitation of reading behavior | variable across children--Haskett et al. (1975) | |
| 2. social interaction | increased--Keogh et al. (1973) | |

| INDEPENDENT VARIABLE: CLASSROOM MATERIALS AND EQUIPMENT | | |
|---|--|--|
| Dependent variable | Results | |
| 1. social interactions | negatively correlated with number of super play units--Brown et al. (1979) | |

INDEPENDENT VARIABLE: NOVELTY/FAMILIARITY OF THE SETTING

| Dependent variables | Results |
|---------------------------------|---|
| 1. children's choice of setting | novel preferred over familiar--Eson <u>et al.</u> (1977) |
| 2. passive/active behavior | when setting was novel, children preferred to be active; when setting was familiar, children preferred to be passive--Eson <u>et al.</u> (1977) |

INDEPENDENT VARIABLE: ACTIVITY/PASSIVITY OF SETTING

| Dependent variable | Results |
|----------------------------|---|
| 1. passive/active behavior | degree of activity/passivity n.s.; when setting was novel, children preferred to be active but when setting was familiar, they preferred to be passive--Eson <u>et al.</u> (1977) |
| 2. attending | was highest when passive activity was preceded by an active activity rather than a passive one--Hawn <u>et al.</u> (1973) |

| INDEPENDENT VARIABLE: SPATIAL DENSITY | | |
|---------------------------------------|---|--|
| Dependent variables | Results | |
| 1. parallel play | no differences--Fagot (1977c) | |
| 2. playing alone | high density> medium> low-- Fagot (1977c) | |
| 3. positive social inter- actions | low density> medium> high-- Fagot (1977c) | |
| 4. negative social inter- action | no differences--Fagot (1977c) | |
| 5. aggression | increased at 15 square feet-- Connolly et al. (1978) | |
| 6. social behavior | no differences in 75 to 25 square feet--Connolly et al. (1978) | |
| 7. noninvolvement | higher in rooms greater than 30 square feet per child--Shapiro (1975b) | |
| 8. random exploratory behavior | tendency to be higher in rooms greater than 50 square feet per child--Shapiro (1975b) | |
| 9. teacher initiates | no differences--Fagot (1977c) | |
| 10. teacher joins | | |
| 11. teacher criticizes | | |
| 12. teacher comments favourably | | |

| INDEPENDENT VARIABLE: PUBLIC/PRIVATE PROPERTY | | |
|---|--|--|
| Dependent variable | Results | |
| 1. sharing behavior | no one forced sharing of private property; several strategies of access used for private and public property--Bluebond-Langner (1977) | |

INDEPENDENT VARIABLE: HOME, FAMILY DAYCARE, CENTER DAYCARE

Dependent variables Results

| | |
|------------------------------|---|
| 1. exploring | more in home and family daycare--Cochran (1977) |
| 2. playing | more in centers--Cochran (1977) |
| 3. role play 4. imitation | trend (n.s.) for F especially in homes to show more--Gunnarsson (1978) |
| 5. information sharing | more in center M than home M or center or home F--Gunnarsson (1978) |
| 6. open conflict | more in center than home--Gunnarsson (1978) |
| 7. cooperative activity | more in center M than home M or center of home F--Gunnarsson (1978) center children spend more time cooperating with each other than children in homes--Johnson (1979) |
| 8. social interactions | more peer interaction for M in centers than in homes--Gunnarsson (1978) no differences for F in centers or homes--Gunnarsson (1978) no overall differences in frequency of socially directed behaviors for family daycare and centers--Howes et al. (1978a) home children spend more time in procuring services from others than center children--Johnson (1979) similar overall proportions of social/nonsocial tasks in centers and homes--Johnson (1979) |

INDEPENDENT VARIABLE: SPATIAL DENSITY

Dependent variables Results

| | |
|----------------------|--|
| 13. teacher controls | higher in rooms with inadequate space--Perry (undated) |
|----------------------|--|

INDEPENDENT VARIABLE: HOME, FAMILY DAYCARE, CENTER DAYCARE

| Dependent variables | Results |
|---|---|
| 9. justification of commands made by peers | more by center children than home children--Gunnarsson (1978) |
| 10. cognitive verbal activities | more in homes when child is involved in adult/child interaction --Cochran (1977) |
| 11. use of nonportable objects | more in centers than family day-care--Howes (1978a) |
| 12. peer behaviors re: age of oldest child | in family daycare, oldest child associated with more talking, smiling, initiating behavior, aggression, but in center daycare, no relationship between oldest child and peer behaviors--Howes (1978a) |
| 13. doll play dilemmas | similar in homes and centers with doll usually disobeying parent--Gunnarsson (1978) |
| 14. Strange Situation Test | less interaction with stranger by daycare children than home children--Ragozin (1980) |
| 15. Assessment of Children's Language Comprehension | no significant differences between full, part time or no daycare--Taylor (1975) |
| 16. Behavioral Maturity Scale | no differences on pre-test; part time gained on post-test--Taylor (1975) |

INDEPENDENT VARIABLE: HOME, FAMILY DAYCARE, CENTER DAY CARE

| Dependent variables | Results |
|---|---|
| 17. Griffiths | no differences between home and family daycare--Cochran (1977) no differences between home and center--Gunnarsson (1978) |
| 18. separation exercises | no overall differences between home, family daycare and centers--Cochran (1977) |
| 19. type of instruction | home adults more directive than center adults--Gunnarsson (1978) |
| 20. use of "do's" and "don't's" | more for center adults than for home adults--Gunnarsson (1978) |
| 21. positive reinforcement | more often used with F than M especially in homes--Gunnarsson (1978) |
| 22. negative reinforcement | more often used by both home and center adults with M--Gunnarsson (1978) |
| 23. justification by adults | no differences between M and F in centers, but F receive more in homes--Gunnarsson (1978) |
| 24. restrictive/negative adult behavior | more in family daycare than centers --Howes (1978b) |

| INDEPENDENT VARIABLE: HOME, FAMILY DAYCARE, CENTER DAYCARE | | |
|--|---|--|
| Dependent variables | Results | |
| 25. experience as mothers | more for family daycare than centers--Howes (1978b) | |
| 26. special training | more for center adults than family daycare--Howes (1978b) | |
| 27. being carried by an adult | more in home--Cochran (1977) | |
| 28. adult/child interaction | more in home and family daycare--Cochran (1977) more play in homes than centers when child involved in adult/child interaction--Cochran (1977) less for M in centers than in homes--Gunnarsson (1978) no differences between F in centers and homes--Gunnarsson (1978) more positive social skills in family daycare than center--Howes et al. (1978b) no difference in dependent, positive affect to caregiver, and imitation of caregiver between family daycare and centers--Howes et al. (1978b) more talking to each other in homes than in centers--Tyler et al. (1980) | |
| 29. adults as social resources | more for center F than M, more for home M than F--Gunnarsson (1978) | |
| 30. adult social interaction | both home and center adults use more teaching and small talk for M and more requesting and demanding for F--Gunnarsson (1978) | |

| INDEPENDENT VARIABLE: HOME, FAMILY DAYCARE, CENTER DAYCARE | | |
|--|--|--|
| Dependent variables | Results | |
| 31. physical contact with caregiver | minimal in both settings--Tyler et al. (1980) | |
| 32. attachment behavior | daycare children show age appropriate behavior--Ragozin (1980) | |

INDEPENDENT VARIABLE: SCHOOL/PROGRAM

| Dependent variables | Results |
|-----------------------------------|---|
| 1. cooperative play | absence of articulate speech in HC affects ability to engage in cooperative play in program directed choices-- <u>Edwards et al.</u> (1979) |
| 2. constructive play | more by children in formal than discovery program-- <u>Johnson et al.</u> (1980) |
| 3. functional play | more by children in discovery program than formal program-- <u>Johnson et al.</u> (1980) |
| 4. nonplay | more by children in discovery than formal program-- <u>Johnson et al.</u> (1980) |
| 5. symbolic play | more total transformations by children in formal than discovery program-- <u>Johnson et al.</u> (1980) |
| 6. use of props 7. social play | no differences-- <u>Johnson et al.</u> (1980) |
| 8. child activity pattern | low in Head Start, high in Montessori-- <u>Berk</u> (1973) |
| 9. unsuccessful conversation | children in traditional initiate more than children in traditional--especially girls-- <u>Borman</u> (1977) |

INDEPENDENT VARIABLE: SCHOOL/PROGRAM

| Dependent variables | Results |
|--|--|
| 10. regulator/control oriented techniques | drop in use by girls in open program-- <u>Borman</u> (1977) |
| 11. norm contingent appeals | drop in use by children in open program-- <u>Borman</u> (1977) |
| 12. target oriented appeals 13. hard regulative appeals | drop in use by children in open, increase by traditional-- <u>Borman</u> (1977) |
| 14. child self direction | higher for MHC in program directed choice settings-- <u>Edwards et al.</u> (1979) |
| 15. friendly initiations | differences between schools-- <u>Leiter</u> (1977) |
| 16. social interactions | no differences for free time spent in social interaction-- <u>Murphy et al.</u> (1976) differences between schools-- <u>O'Connor</u> (1975) Montessori differs from parent coop and university lab preschool-- <u>Reuter et al.</u> (1973) |
| 17. verbal interactions | more in Montessori-- <u>Murphy et al.</u> (1976) |
| 18. nonverbal interactions | more in comparison school-- <u>Murphy et al.</u> (1976) |

INDEPENDENT VARIABLE: SCHOOL/PROGRAM

| Dependent variables | Results |
|---|--|
| 19. peer dependent | differences between schools-- O'Connor (1975) |
| 20. disruptive behavior | differences between classes-- Pastor et al. (1978) |
| 21. negative behaviors | least time spent in these behaviors by Montessori children--Reuter et al. (1973) |
| 22. reciprocity in social interactions | schools very similar but in one school a higher proportion of agree responses following friendly initiations--Leiter (1977) |
| 23. task persistence | higher in one class than another-- Fagot (1973) differences among 5 programs-- Rosenberg (1976) |
| 24. Merrill Palmer | Head Start children made signifi- cant gains compared to Montessori-- Karlson et al. (1973) |
| 25. emphasis on transition | common to all programs--Berk (1973) |
| 26. de-emphasis on block building and body maintenance | |
| 27. readying children | |
| 28. minimizing non-active behavior | |
| 29. teacher as participant | |

INDEPENDENT VARIABLE: SCHOOL/PROGRAM

| Dependent variables | Results |
|------------------------------------|---|
| 30. media experiences | high in Franchise and community daycare--Berk (1973) |
| 31. commands/requests | in all programs but Montessori commands used 50-75% but in Montessori requests used 75%-- Nucci et al. (1976, 1978) |
| 32. teacher beliefs | do not appear to strongly match practices--Verma et al. (1974) |
| 33. parent involvement | least parental involvement, highest child centered program-- Shapiro (1975a) |
| 34. adult dependent | differences between schools-- O'Connor (1975) high in program directed choice settings for HC child--Edwards et al. (1979) |
| 35. adult/child interactions | differences in compliance for children in multigenerational and traditional programs--Kerschner (1977) differences between schools-- O'Connor (1975) Montessori differs from parent coop and university lab--Reuter et al. (1973) |
| 36. teacher behaviors re: child | differences between programs on several variables--Rosenberg (1977) |

INDEPENDENT VARIABLE: SURBURBAN/URBAN SEGREGATED/INTEGRATED SCHOOL

| Dependent variables | Results |
|-------------------------------------|--|
| 1. time spent on procedural matters | in surburban, urban segregated, and urban integrated, greatest amount of time was spent on this area--Berkeley (1979) white segregated > urban integrated > black segregated--Berkeley (1979) |
| 2. time spent on cognitive activity | second largest amount of time for the three schools--Berkeley (1979) |
| 3. interruptions | black segregated much larger than urban/suburban--Berkeley (1979) |
| 4. reprimand/praise | more reprimand than praise in all three--Berkeley (1979) |

INDEPENDENT VARIABLE: SCHOOL/PROGRAM

| Dependent variables | Results |
|---|---|
| 37. caregiver involvement with children | direct--53%, passive or noninvolved --47%--Silberman (1975) |

INDEPENDENT VARIABLE: INTEGRATED/SEGREGATED PRESCHOOL FOR
HANDICAPPED CHILDREN

| Dependent variables | Results |
|-------------------------|---|
| 1. social participation | higher for HC in regular pre-school; HC had lower level than NHC classmates--Wilton et al. (1977) |
| 2. play | more time spent in special pre-school on play; HC showed similar pattern to NHC in regular school but scores were lower--Wilton et al. (1977) |
| 3. group play | HC showed more in regular school than in special preschool--Wilton et al. (1977) |

INDEPENDENT VARIABLES: HOMOGENEOUS (H0)/HETEROGENEOUS (HE)
AGE/SOCIAL CLASS (SES)--FREE PLAY (FP)/
ORGANIZED WORK (OW)

| Dependent variables | Results |
|---------------------------------|--|
| 1. goal directed behavior | H0 age and H0 SES largest amount of time in goal directed behavior --Beller (1974) |
| 2. dramatic play | more frequent in HE SES--Beller (1974) |
| 3. dramatic play with others | more frequent in HE age group--Beller (1974) |
| 4. cooperative play | more often in HE SES--Beller (1974) |
| 5. parallel play | more frequent in H0 age--Beller (1974) |
| 6. intentional physical contact | more often in HE age/H0 SES group --Beller (1974) |
| 7. time alone | more often in H0 age and H0 SES groups--Beller (1974) |
| 8. time with others | more often with HE age and HE SES groups--Beller (1974) |
| 9. involved looking | more often in H0 than HE SES groups--Beller (1974) |

INDEPENDENT VARIABLES: HOMOGENEOUS (HO)/HETEROGENEOUS (HE)
AGE/SOCIAL CLASS (SES)--FREE PLAY (FP)/
ORGANIZED WORK (OW)

Dependent variables Results

| | |
|---|--|
| 18. positive peer interaction | (FP) more in HO age and HE SES-- Beller (1974) |
| 19. negative peer interaction | (FP) more in HO age and HE SES-- Beller (1974) |
| 20. negative reaction to peers | (FP) HO age/HE SES had most-- Beller (1974) |
| 21. distracting social participation | (OW) least in HE/HE group-- Beller (1974) |
| 22. cooperative peer interactions | (FP/OW pooled) higher in HE/HE groups lower in HO/HO--Beller (1974) |
| 23. response to novel experience | increase over time in HE age group re: positive affect, HO age group did not change or decrease-- Beller (1974) |
| 24. cooperativeness | increase over time in lower class children in HE/HE groups, and de- crease in HO SES groups--Beller (1974) |
| 25. persistence | HE SES children persisted less and showed more positive affect, HO SES tried longer and showed more negative affect--Beller (1974) |

INDEPENDENT VARIABLES: HOMOGENEOUS (HO)/HETEROGENEOUS (HE)
AGE/SOCIAL CLASS (SES)--FREE PLAY (FP)/
ORGANIZED WORK (OW)

Dependent variables Results

| | |
|--|--|
| 10. noninvolved | more often in HO than HE SES groups--Beller (1974) |
| 11. assertive behavior | (FP) lower class children more assertive towards adults than lower class in HO SES--Beller (1974) |
| 12. passive/dependent | (FP) more often in HO lower class groups--Beller (1974) |
| 13. positive directive modelling | (FP/OW pooled) HE age group more than HO age group--Beller (1974) |
| 14. child affiliative behavior | (FW/OW pooled) more in HO lower class groups, less in HE age/SES group--Beller (1974) (OW) least in HE/HE group, most in HO age and HE SES--Beller (1974) |
| 15. interaction with physical environment | no differences--Beller (1974) |
| 16. negative directive behavior to peers | (FP) HO age/HE SES had most-- Beller (1974) |
| 17. playful physical contact with peers | (FP/OW pooled) most in HE age/ HO lower SES--Beller (1974) |

| INDEPENDENT VARIABLES: HOMOGENEOUS (HO)/HETEROGENEOUS (HE) AGE/SOCIAL CLASS (SES)--FREE PLAY (FP)/ ORGANIZED WORK (OW) | | |
|--|--|--|
| Dependent variables | Results | |
| 26. appropriate use of materials | more in HE SES groups and less in HO SES--Beller (1974) | |
| 27. involvement/flexibility | HE age groups--decreased in involvement, increase in flexibility; HO age groups increased in involvement and decreased in flexibility--Beller (1974) | |
| 28. IQ | HO age group declined; HE age group increased--Beller (1974) | |
| 29. nondirective adult | (FP) more in HE SES than HO SES--Beller (1974) | |
| 30. adult physical contact | (OW) more in HO age groups--Beller (1974) (FP/OW Pooled) least in HO SES and HE age--Beller (1974) | |
| 31. teacher nonresponsive | (OW) tendency to be more in HO SES --Beller (1974) | |
| 32. adult compliance | least in HO age/HE SES and most in HE/HE groups--Beller (1974) | |
| 33. caregiver initiations | (FP) more actively accepted by HE SES--Beller (1974) | |

| INDEPENDENT VARIABLES: HOMOGENEOUS (HO)/HETEROGENEOUS (HE) AGE/SOCIAL CLASS (SES)--FREE PLAY (FP)/ ORGANIZED WORK (OW) | | |
|--|---|--|
| Dependent variables | Results | |
| 34. caregiver help/suggestions | (FP) more in HE SES--Beller (1974) | |
| 35. teacher verbal interactions | more in HE SES than HO (lower class) SES--Beller (1974) | |
| 36. teacher time in educational activities | | |
| 37. teacher "individual" orientation | | |
| 38. use of discovery approach | | |
| 39. teacher custodial care | more in HO (lower) SES than HE | |
| 40. teacher control of selection of materials | SES especially when age group was HO--Beller (1974) | |
| 41. teacher control | | |
| 42. teacher sensitivity | more in HE SES groups than HO SES groups--Beller (1974) | |
| 43. teacher responsiveness | | |
| 44. teacher praise | | |
| 45. teacher affection | | |
| 46. teacher criticism | more in HO SES group than HE SES groups--Beller (1974) | |
| 47. teacher intrusiveness | | |
| 48. teacher facilitativeness | | |
| 49. affiliative behavior toward adults | (FP) HE groups lower class children exhibit more positive affiliative behavior--Beller (1974) | |
| 51. staring at caregiver | (OW) more by children in HO SES and HE age group--Beller (1974) | |

| INDEPENDENT VARIABLES: HOMOGENEOUS (H0)/HETEROGENEOUS (HE) AGE/SOCIAL CLASS (SES)--FREE PLAY (FP)/ ORGANIZED WORK (OW) | | |
|--|--|--|
| Dependent variables | Results | |
| 52. positive adult interactions | (FP/OW pooled) HE groups more than H0 groups--Beller (1974) | |
| 53. positive affect to strange adults | in HE age group a higher increase-- Beller (1974) | |
| 54. negative affect to strange adults | decreased in HE SES groups for lower class children over time; increased in H0 lower class over time--Beller (1974) | |
| 55. children seeking help from adults | more often in HE age groups-- Beller (1974) | |
| 56. glancing at adults | least often in HE age groups-- Beller (1974) | |

| INDEPENDENT VARIABLE: USE OF SPANISH/ENGLISH AS LANGUAGE OF INSTRUCTION | | |
|--|--|--|
| Dependent variables | Results | |
| 1. % of questions asked | higher in Spanish--Townsend et al. (1975) | |
| 2. % of student responses | | |
| 3. % rejecting student's answer | | |
| 4. % accepting student's answer | | |
| 5. % direction giving | higher in English--Townsend et al. (1975) | |
| 6. % of student response followed by teacher praise | | |
| 7. % of use of two or more consecutive reinforcing behaviors | | |

INDEPENDENT VARIABLE: PARENT INVOLVEMENT

| Dependent variables | Results |
|----------------------------------|--|
| 1. child centeredness of program | highest with least parental involvement--Shapiro (1975a) |

INDEPENDENT VARIABLE: TIME OF DAY

| Dependent variables | Results |
|----------------------------|---|
| 1. amount/type of language | no tendency for variance--Hughes et al. (1979) |
| 2. privacy seeking | interacted with area, being higher for some areas in the AM and others in the PM--Jacobs (1979) |

INDEPENDENT VARIABLE: TIME OF YEAR

| Dependent variables | Results |
|----------------------|---|
| 1. peer interactions | increased in the second semester-- Field (1980) |
| 2. cooperative play | increased in the second semester-- Field (1980) |
| 3. fantasy play | increased in the second semester-- Field (1980) |
| 4. time on task | increased slightly in March-- Forness <u>et al.</u> (1975) |

INDEPENDENT VARIABLE: LONGITUDINAL EFFECTS

| Dependent variables | Results |
|------------------------------|---|
| 1. solitary play | decreased over time--Smith (1978), Guralnick (1978) |
| 2. parallel play | no significant variations--Smith (1978), Guralnick (1978) |
| 3. group play | increased over time--Smith (1978) |
| 4. cooperative play | increased--Guralnick (1978) |
| 5. associative play | no difference--Guralnick (1978) |
| 6. unoccupied | no difference--Guralnick (1978) |
| 7. constructiveness of play | increased--Guralnick (1978) |
| 8. verbal interactions | increase for HC when integrated with NHC--Plummer (1977) |
| 9. child social interactions | high social activity at 2 1/2 years of age related to high social activity at 7 1/2-- Halverson <u>et al.</u> (1976) social participation of HC in- creased over time when integrated with NHC--Plummer (1977) Mi reduced interactions with S and increased with NHC while NHC reduced interactions with S and increased with Mi--Guralnick (1978) |

INDEPENDENT VARIABLE: CHILD/TEACHER RATIO

| Dependent variables | Results |
|---|--|
| 1. child vocalization to child | no difference--Asher et al. (1979) |
| 2. touching another child with approval | no difference--Asher et al. (1979) |
| 3. physically restraining another child | no difference--Asher et al. (1979) |
| 4. playing (child) | no difference--Asher et al. (1979) |
| 5. moving (child) | no difference--Asher et al. (1979) |
| 6. number of children proximal to child | no difference--Asher et al. (1979) 7:1 > 3.5:1--O'Connor (1975) |
| 7. parallel play 8. associative play 9. cooperative play | 12:1 > 4:1--Field (1980) |
| 10. onlooker/unoccupied | 4:1 > 12:1--Field (1980) |
| 11. solitary play 12. positive play 13. child disruption of interaction | no difference--Field (1980) |
| 14. moving (teacher) | 12:1=8:1 > 4:1--Asher et al. (1979) |

INDEPENDENT VARIABLE: LONGITUDINAL EFFECTS

| Dependent variables | Results |
|---|--|
| 10. high activity level | stable over 5 years--Halverson et al. (1976) |
| 11. sex stereotyped behavior | behaviors given a high amount of teacher/peer feedback changed--Fagot (1979) |
| 12. sociability to adults/peers 13. affiliative behavior to adults/peers | increased--Emmerich (1977) |
| 14. submissiveness to adults/peers | decreased--Emmerich (1977) |

| INDEPENDENT VARIABLE: CHILD/TEACHER RATIO | | |
|--|--|--|
| Dependent variables | Results | |
| 15. teacher vocalization to teacher | no difference--Asher et al. (1979) | |
| 16. teacher housekeeping | | |
| 17. teacher play | | |
| 18. teacher in play space during interaction | | |
| 19. child vocalization to teacher | 4:1 > 8:1 or 12:1--Asher et al. (1979) | |
| 20. touching teacher with approval | 4:1 > 8:1 or 12:1--Asher et al. (1979) | |
| 21. physically restraining teacher | no difference--Asher et al. (1979) | |
| 22. number of teachers proximal to child | no difference--O'Connor (1975) 4:1 > 8:1 > or 12:1--Asher et al. (1979) | |
| 23. teacher vocalization to child | 12:1 > 4:1 > 8:1--Asher et al. (1979) | |
| 24. teacher touching child with approval | | |
| 25. teacher at child's level | | |
| 26. teacher physically restraining child | no difference--Asher et al. (1979) | |
| 27. number of children proximal to teacher | | |
| 28. number of teachers proximal to teacher | | |

| INDEPENDENT VARIABLE: CHILD/TEACHER RATIO | | |
|--|---|--|
| Dependent variables | Results | |
| 29. more child social interactions/fewer adult/child | 7:1 > 3.5:1--O'Connor (1975) 12:1 > 4:1--Asher et al. (1979) 12:1 > 3.5:1--Reuter et al. (1973): fewer social interactions with NHC as number of adults increased --Brown et al. (1979) | |
| 30. teacher disruption of interaction | 4:1 > 12:1--Field (1980) | |
| 31. teacher interactions | | |
| 32. individual vs group contacts | 8:1 > 11:1--Shapiro (1975b) but interaction with class size | |

INDEPENDENT VARIABLE: CLASS SIZE

INDEPENDENT VARIABLE: GROUP SIZE WITHIN CLASS

| Dependent variables | Results | Dependent variables | Results |
|---------------------|---------|---------------------|---------|
|---------------------|---------|---------------------|---------|

| | |
|------------------------------------|---|
| 1. level of social play | when class size was combined with number of complex play units and number of barriers, it accounted for 23% of the variance in HC's play--Brown et al. (1979) |
| 2. child social interactions | small class size--close knit friendship group, cross-sex friendships--Connolly et al. (1978) large class size--dispersed friendships, same sex, small sets of children--Connolly et al. (1978) |
| 3. fantasy play | more in small class--Connolly et al. (1978) |
| 4. amount of social inter- actions | no difference--Shapiro (1975b) but interaction with ratio |
| 5. teacher warmth | related highly to class size--Huston-Stein et al. (1977) |

| | |
|---|---|
| 1. child social interactions | in small group, more social behavior toward peers for isolates but not nonisolates--Scarlett (1980) in small group, isolates were targets of more individual social behaviors not the case for non-isolates--Scarlett (1980) highly correlated--Vandell et al. (1978) |
| 2. unoccupied time | in small group, less for isolates but not nonisolates--Scarlett (1980) |
| 3. onlooker activity | no differences--Scarlett (1980) |
| 4. manner of interacting | no differences--Scarlett (1980) |
| 5. group glee | less frequent in groups of less than three or four--Sherman (1975) |
| 6. child behaviors | no difference--Asher et al. (1979) |
| 7. teacher touching child with approval | greater with change of class size--Asher et al. (1979) |

| INDEPENDENT VARIABLE: PROBLEMS ENCOUNTERED BY PRESCHOOL CHILDREN | | INDEPENDENT VARIABLE: OBSERVER PRESENCE | |
|--|---|---|---|
| Dependent variables | Results | Dependent variable | Results |
| 1. rate of solving | 30-40% of the time with or without help--Charlesworth (1979) | 1. stability of child behavior | child behavior stabilized in 4 to 6 days--Forness et al. (1977) |
| 2. post problem behavior | child resumed behavior interrupted by problem 30% of the time --Charlesworth (1979) | | |
| 3. adult intervention | 10% of the time--Charlesworth (1979) | | |

INDEPENDENT VARIABLES: WHOLE CLASS RECITATION
INDEPENDENT SEATWORK
CONTINUOUS CENTRAL SIGNAL EMISSION

| Dependent variables | Results |
|--|--|
| 1. off-task behavior 2. distractibility 3. nonparticipatory/ passive 4. nonconstructively self-directed | more in whole class recitation than in seatwork; more in whole class recitation than in continuous central signal emission--Oxford et al. (1979) |

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